### **Powder Diffraction File™**

Allphabeitical Indexes

Unorganic Phases

Seis 1-15/2

Alphalestices in services (Alphalestices) autoexapsites (Alphalestices) au

International Centre for Diffraction Data



# Powder Diffraction File PDF

### Alphabetical Indexes for Experimental Patterns

## Inorganic Phases Sets 1-52

Compiled by the International Centre for Diffraction Data in cooperation with:

American Ceramic Society
American Crystallographic Association
American Society for Testing and Materials
Australian X-Ray Analytical Association
British Crystallographic Association
The Ceramic Society of Japan
The Clay Minerals Society
Deutsche Gesellschaft für Kristallographie
Deutsche Mineralogische Gesellschaft
The Institute of Physics
The Mineralogical Association of Canada
The Mineralogical Society of America
Mineralogical Society of Great Britain and Ireland
Société Française de Minéralogie et de Cristallographie

#### **International Centre for Diffraction Data**

12 Campus Boulevard Newtown Square, Pennsylvania 19073-3273 U.S.A. Phone: 610.325.9814 Fax: 610.325.9823 E-mail: INFORMATION@ICDD.COM Web Sites: www.icdd.com

www.dxcicdd.com www.ixas.org



Copyright 2002 JCPDS—International Centre for Diffraction Data

All rights reserved. No part of this publication may be reproduced or transmitted in any form, or by any means, electronic or mechanical, including photocopying, recording, or any information storage and retrieval system, in existence now or developed in the future, without permission in writing from the publisher.

ICDD®, the ICDD logo degrap®, and PDF® are registered in the U.S. Patent and Trademark Office.

Powder Diffraction File™ is a trademark of the JCPDS—International Centre for Diffraction Data.

The information contained herein is subject to modification and revision by the International Centre for Diffraction Data, and users should determine, by contacting the ICDD or otherwise, whether this copy contains the most recent version thereof. The ICDD is a not-for-profit corporation which collects, compiles, and disseminates this information in the public interest. The ICDD cannot and does not assume responsibility for its accuracy, completeness, or currency.

Printed in U.S.A.

#### Zeolite and Molecular Sieve Indexes

Reviewed by: Volunteer Editors—Specialty Index

J. Michael Bennett 661 Weadley Road Radnor, Pennsylvania 19087 U.S.A.

Susan Quick The Pennsylvania State University Computer Science and Engineering University Park, Pennsylvania 16802 U.S.A.

Ronald C. Medrud Chevron Research and Technology Co. Richmond, California 94802-0627 U.S.A.

					. <b>Z</b>	eolite	Stru	cture 1	Tupe No	ıme-	_Cod	e.	
Aleman	PDF# (	OB4		Stronge	est _	Cell	Paran	neters	Cel	Angl	es (	irys.	Chemical
olite Name	PDF# (	ZIVI	Re	flectio		a	b r:	C A (RW	<u>~</u> } <i>AB</i> ₩	<u>β</u> ,	<u> </u>	Sys.	Formula
(L) 729 724 724 724	45- 631 · 52-1408 48- 517 48- 518	, i	2.52, 8.59, 2.98, 3.09,	4.02 <sub>6</sub> 3.31 <sub>6</sub> 6.08 <sub>8</sub> 6.27 <sub>x</sub>	2.78 <sub>6</sub> 3.10 <sub>5</sub> 2.88 <sub>7</sub> 2.98 <sub>9</sub>	8.23 10.85 7.82 .8.02	5.03 8.29 9.66 10.04	8.27 5.16 4.74 4.85	90.00 90.00 90.00 90.00	07.46 90.00 90.00 90.00	90.00 90.00 90.00 90.00	M 0000	Liaisio <sub>4</sub> Lizaao <sub>4</sub> +H <sub>2</sub> O Liabe <sub>4</sub> Pa <sub>10</sub> =4H <sub>2</sub> O Liabe <sub>4</sub> Pa <sub>4</sub> O <sub>16</sub> +4H <sub>2</sub> O Liabe <sub>4</sub> Pa <sub>4</sub> O <sub>16</sub> +4H <sub>2</sub> O
9720 9720 Milion Zine Phosphate Hydrate magned zeolite solite ABW	48- 502 44- 51	* · · · · · · · · · · · · · · · · · · ·	6.42 <sub>x</sub> 6.58 <sub>x</sub> 6.38 <sub>x</sub> 3.11 <sub>x</sub> 6.46 <sub>x</sub>	3.02 <sub>8</sub> 3.81 <sub>6</sub> 4.28 <sub>7</sub> 4.69 <sub>6</sub> 3.21 <sub>8</sub>	3.21 <sub>6</sub> 3.10 <sub>4</sub> 3.04 <sub>7</sub> 3.26 <sub>6</sub> 3.04 <sub>7</sub>	8,12 8.29 10.03 8.28 10.47	10.49 10.82 16.55 9.40 8.21	4.85 5.16 5.01 5.40 6.03	90.00 90.00	90.00 90.00 90.00 90.00	90.00 90.00 90.00 90.00	0 0000	Li,Zn,I+40,16*4H2O Li,Zn,I+A+0,76*4H3O LIZBP04*H3O TAISIO4 LiGaSiO4*H2O
ABW (TI)  ABW, (Li)  Li ABW, (Li)  Li ABW, (Li)  Li ABW, (Li)  ABW, (Li)  ABW, (Li)	45- 132 27-1211 39- 160 39- 215 40- 63	C 1 0 C 0	4.69 <sub>x</sub> 6.44 <sub>x</sub> 3.17 <sub>x</sub> 6.41 <sub>x</sub> 3.96 <sub>x</sub>	8.11 <sub>8</sub> 8.17 <sub>8</sub> 6.41 <sub>x</sub> 3.03 <sub>8</sub> 2.74 <sub>5</sub>	3.27 <sub>7</sub> · 3.03 <sub>7</sub> 3.03 <sub>5</sub> 3.17 <sub>8</sub> 5.48 <sub>5</sub>	8.30 8.18 10.31	9.42 10.81 8.18	5.41 5,00 5.00	90.00	90.00 90.00 90.00	90.00 90.00 90.00	0 0 0 0	Tl <sub>1.1</sub> AlSiO <sub>4</sub> LiAlSiO <sub>4</sub> *2H <sub>2</sub> O Li <sub>2</sub> Al <sub>2</sub> Si <sub>2</sub> O <sub>2</sub> *2H <sub>2</sub> O Li <sub>2</sub> Al <sub>3</sub> Si <sub>2</sub> O <sub>2</sub> *2H <sub>2</sub> O Li <sub>2</sub> Al <sub>3</sub> Si <sub>2</sub> O <sub>3</sub> *0*3*92H <sub>2</sub> O Li <sub>2</sub> Al <sub>3</sub> Si <sub>2</sub> O <sub>2</sub> *0*18H <sub>2</sub> O
ABW, (Li)	41- 554 47- 27	С	3.03 <sub>x</sub> 4.02 <sub>x</sub>	3.17 <sub>x</sub> 3.94 <sub>x</sub>	6.42 <sub>9</sub> 3.17 <sub>7</sub>	10.31 7.23	8.19 10.27	4.99 12.05 .	90.00 90.00	90.00 90.00	90.00 90.00	0	Li <sub>4</sub> Al <sub>4</sub> Si <sub>4</sub> O <sub>15</sub> -4H <sub>2</sub> O Li <sub>4</sub> Si <sub>5</sub> O <sub>4</sub>
	40.004	_	7.00	3.226	•.	10.24	10.24	ACP-1- 9.65	-ACO 90.00	00.00	90.00		OH NAME OF BOOKS
(P.1	49- 624	С	7.02 <sub>x</sub>	0.225	3.244	10.24			8AEI	90.00	20.00	Т.	CaH40Na*[A10,89C07,13P9C32]*4H2O
1904-18 1904-18 1904-18 1904-18 1904-18	43- 568 45- 117 45- 118 47- 608	0000	9.21 <sub>x</sub> 9.20 <sub>x</sub> 9.33 <sub>x</sub> 9.31 <sub>x</sub>	5.24 <sub>8</sub> 5.20 <sub>8</sub> 8.34 <sub>2</sub> 5.22 <sub>2</sub>	4.24 <sub>5</sub> 4.22 <sub>4</sub> 5.25 <sub>1</sub> 6.16 <sub>2</sub>	13.51 13.71	12.62 12.73	18.44 18.57	90.00	95.55 90.01	90.00 90.00	X M M X	$\begin{array}{l} AIPO_4 \circ 0.45H_3O \\ (AIPO_4)_{s}(((C_DH_S)_cN))_{DSS}(OH)) \\ AIPO_4 \\ AIPO_4 \end{array}$
							A	lPO4-1	1—AEL				
1904-11 1904-11 1904-11 1754-10-11 174-10-11	41- 556 43- 563 47- 599 48- 104 41- 555	0 0 0	10.9 <sub>x</sub> 4.23 <sub>x</sub> 4.06 <sub>x</sub> 4.21 <sub>x</sub> 4.22 <sub>x</sub>	9.24 <sub>8</sub> 3.93 <sub>6</sub> 5.50 <sub>5</sub> 3.83 <sub>8</sub> 3.84 <sub>7</sub>	4.19 <sub>8</sub> 3.83 <sub>7</sub> 3.79 <sub>6</sub> 3.93 <sub>6</sub> 4.02 <sub>5</sub>	13.53 13.47	18.48 18.71	5,37 8.44 8.44	90.00 90.00	90.00 90.00 90.00	90.00 90.00	0 X X 0	AlmPa;Oss AIPO; *0.24HzO AIPO; Mn-Al-Si-P-O-HzO-(C3H1)2NH2 Mn-Al-Si-P-O-Mc(G-H <sub>1</sub> NN);
A 0-11 A 0-11 A 0-11 A 0-11 A 0-11 A 0-11	41- 23 41- 24 42- 428 46- 647	i i 0 0 0	9.32 <sub>x</sub> 5.51 <sub>x</sub> 4.28 <sub>x</sub> 4.24 <sub>x</sub>	4.21 <sub>8</sub> 4.06 <sub>4</sub> 3.84 <sub>7</sub> 3.92 <sub>8</sub>	10.9 <sub>6</sub> 9.02 <sub>x</sub> 3.95 <sub>6</sub> 4.37 <sub>6</sub>	18.67 18.06	13.87 18.80	8.42 8.13	90.00 90.00	90.00 90.00	90.00	0 0 X X X	C <sub>12</sub> H <sub>20</sub> N <sub>1</sub> *A <sub>12</sub> <sub>2</sub> H <sub>2</sub> O <sub>20</sub> P <sub>10</sub> Si <sub>2</sub> Al <sub>22</sub> H <sub>2</sub> Si <sub>2</sub> P <sub>1</sub> O <sub>20</sub> *16H <sub>2</sub> O C <sub>6</sub> H <sub>16</sub> N-Al <sub>2</sub> O <sub>7</sub> SiO <sub>7</sub> -P <sub>2</sub> O <sub>7</sub> -H <sub>2</sub> O C <sub>12</sub> H <sub>28</sub> N-H <sub>2</sub> OAl <sub>2</sub> O <sub>8</sub> SiO <sub>7</sub> -P <sub>7</sub> O <sub>8</sub>
AFO-11 AFC-11 AFSO-11 ARSO-11	47- 613 47- 614 48- 847 46- 848	0	4.17 <sub>x</sub> 4.05 <sub>x</sub> 4.23 <sub>x</sub> 4.08 <sub>x</sub>	3.99 <sub>8</sub> 5.50 <sub>6</sub> 3.83 <sub>9</sub> 5.51 <sub>8</sub>	3.82 <sub>6</sub> ·3.79 <sub>6</sub> 3.93 <sub>8</sub> 3.80 <sub>6</sub>							X X X	Alo.57Sio.4P0.30O2 AleSio.38P1.74O8.08 Co.02H1.06Alo.46N0.57O2P0.47Sio.04Ti0.01*0.07[(C3H7)2NH)(Ti0.01 Alo.48O2P0.47Sio.04Ti0.01
1PO4-8	43- 561	0	13.6 <sub>x</sub>	4.198	16.78		-	UP04-8				x	AlgP_194O7.86* 3H2O
1F04-8 1F04-8	46- 551 47- 245	Ö	13,3 <sub>g</sub> 16.4 <sub>g</sub>	16.6g 13.6g	4.13g 4.17 <sub>7</sub>	83.29	14.46	8.26	90.00	90.00	90.00	O X	AlscPseO144 Al-P-O
ighanite	46-1264	*	3. <del>6</del> 9 <sub>z</sub>	3.306	4.833	12.60	12.80	fghanii <sup>21,41</sup> AIPO4-	90,00	-	120.00	H	(Na,Ca,K) <sub>2</sub> (Si,Al) <sub>12</sub> O <sub>25</sub> (SO <sub>4</sub> ,Cl) <sub>3</sub>
1204-6 11704-8 11704-6 11704-6 11704-6	39- 216 40- 71 41- 44 41- 557	C i C	11.9 <sub>g</sub> 11.8 <sub>x</sub> 11.9 <sub>x</sub> 11.9 <sub>x</sub>	3.96 <sub>7</sub> 3.96 <sub>7</sub> 3.97 <sub>4</sub>	4,21 <sub>g</sub> 4,24 <sub>4</sub> 4,48 <sub>5</sub> 4,24 <sub>4</sub>	18.71 13.73 18.71 13.74	13.71 13.73 13.71 13.74	8.43 8.48 8.46 8.47	90.00 90.00 90.00 90.00	90.00 90.00 90.00	120.00 120.00 120.00 120.00	H H H	$\begin{array}{lll} A_{12}P_{12}O_{42}[(C_2H_7)_4N]OH\\ A_1PO_4 \times B_2O\\ A_1PO_4\\ A_1P_2P_{42}O_{43}(C_3H_7)_4NP \end{array}$
1104-6 1104-6 34P0-5 166AP0-5 166AP0-6	44- 44 48-1080 50- 612 48- 684 48- 685	C i *	11.9 <sub>x</sub> 11.9 <sub>x</sub> 11.4 <sub>x</sub> 3.98 <sub>x</sub> 3.98 <sub>x</sub>	4.51 <sub>2</sub> 3.97 <sub>5</sub> 4.43 <sub>8</sub> 4.22 <sub>6</sub> 4.52 <sub>9</sub>	4.19 <sub>1</sub> 4.50 <sub>4</sub> 3.92 <sub>7</sub> 4.51 <sub>6</sub> 12.0 <sub>9</sub>	13.77 13.71 13.61 13.77 13.81	13.77 13.71 13.61 13.77 13.81	8.38 8.43 8.38 8.48 8.44	90.00 90.00 90.00 90.00 90.00	90.00 90.00 90.00 90.00 90.00	120.00 120.00 120.00 120.00 120.00	H H H H	APO4 C#H3.1%N0.760.3%*Cm.03AlsssPO4*20H3O AlscConstPO4.3dC.H4.0MCH5.CH4.0H Mgp.31C00.18Als.8F207.33*0.52H2O*0.20(C5.H4.0)3N Mn0.17-Con.23Als.8F207.38*1.02H2O*0.20(C5.H4.0)3N
M 0-5 M 0-5 M 0-6 82/24	47- 618 47- 619 49- 659 45- 130 45- 131	00000	12.0 <sub>x</sub> 11.8 <sub>x</sub> 3.97 <sub>x</sub> 11.8 <sub>g</sub> 4.45 <sub>g</sub>	3.99 <sub>9</sub> 3.93 <sub>x</sub> 4.23 <sub>7</sub> 4.47 <sub>g</sub> 3.92 <sub>g</sub>	4.21 <sub>7</sub> 4.17 <sub>6</sub> 4.49 <sub>6</sub> 3.94 <sub>g</sub> 11.8 <sub>g</sub>	13.67 13.60	13.67 13,60	8.33 8.28	90.00 90.00	00100	120.00 120.00	X X H H	Ala <sub>47</sub> Sib <sub>20</sub> P <sub>0,45</sub> Cy + 0.04C <sub>12</sub> H <sub>29</sub> N + 0.13H <sub>2</sub> O Ala <sub>47</sub> Sib <sub>20</sub> P <sub>0,45</sub> Cy Al <sub>2</sub> O <sub>4</sub> + P <sub>2</sub> O <sub>5</sub> + 0.2SiO <sub>2</sub> + 1.5(C <sub>2</sub> H <sub>5</sub> ) <sub>2</sub> N + 40H <sub>2</sub> O SiO <sub>2</sub> SiO <sub>2</sub>
87:24 87:24 94:50-5 14:50-5 Unamed zeolite	46- 845 46- 846 47- 680	0	3.99 <sub>x</sub> 11.8 <sub>x</sub>	12,1 <sub>9</sub> 3.95 <sub>6</sub>	4.25a 4.234	19.60	10.60	8.30	90.00	90.00	120.00	X X R	Co.486H1.124Al0.49N0.034O2Po.48Siq.01Tiq.03=0.0B4[(C3H1)2N](Tiq.03 Alo.49O2Po.48Siq.01Tiq.03 24SiO2=C12H22NO
Telling Septice	41- 000	*	4.46 <sub>x</sub>	11.82	3.939	13.62	13.62 A		50.00 1—AFN	30.00	200.00	**	· · · · · · · · · · · · · · · · · · ·
Macanied zeolite  1274-14  1274-14  1274-14  1274-14  1274-14  1274-14	43- 565 46- 630 46- 751 47- 603	0 0 0	9.61 <sub>x</sub> 9.80 <sub>x</sub> 3.85 <sub>x</sub> 9.83 <sub>x</sub>	3.92 <sub>4</sub> 3.93 <sub>3</sub> 3.74 <sub>6</sub> 6.71 <sub>8</sub>	9.41a 2.89a 11.25 4.774		_		1—AFC	•		X X X	Al <sub>7</sub> O <sub>3</sub> *1.00P <sub>2</sub> O <sub>5</sub> *0.91H <sub>2</sub> O*0.49C <sub>4</sub> H <sub>11</sub> N NH <sub>2</sub> (C <sub>2</sub> H <sub>7</sub> )h <sub>4.12</sub> Co <sub>5,08</sub> Al <sub>4,68</sub> Si <sub>0.08</sub> P <sub>0.46</sub> O <sub>2</sub> *0.09H <sub>2</sub> O Na <sub>1.2</sub> Al <sub>2</sub> Si <sub>27</sub> O <sub>57,4</sub> *x(C <sub>10</sub> H <sub>22</sub> O <sub>5</sub> )*zH <sub>3</sub> O AlPO <sub>4</sub>
### UP04-41 UP04-41 UAE0-41 SP0-41	46- 556 52- 211 46- 682 47- 633 47- 634	00000	12.9 <sub>x</sub> 4.00 <sub>x</sub> 4.21 <sub>x</sub> 4.21 <sub>x</sub> 4.17 <sub>x</sub>	9.10 <sub>8</sub> 4.20 <sub>x</sub> 4.01 <sub>6</sub> 4.02 <sub>6</sub> 3.99 <sub>6</sub>	4.18 <sub>6</sub> 3.67 <sub>5</sub> 3.88 <sub>2</sub> 3.90 <sub>4</sub> 3.90 <sub>4</sub>	9.72 9.71	18.79 25.82	8.36 8.35	90.00 90.00	90.00 90.00	110.60 90.00	M 0 X X X	AlPO4 AlPO4 ColssHarsNo.048Mgoos2Alo.451Po.457P2*xH2O AlaaSia.08Po.40O2*0.02C18H38N*0.26H3O AlaaSia.08Po.40O2
NPO4-40	52- 162 47- 626 47- 627	* 0	10.8 <sub>x</sub> 11.0 <sub>x</sub> 11.2 <sub>x</sub>	6.39 <sub>a</sub> 6.47 <sub>4</sub> 11.6 <sub>8</sub>	11.6 <sub>9</sub> 3.26 <sub>2</sub> 4.77 <sub>2</sub>	21.70	13.71	14.21	90.00	90.00	90.00	o X	(C <sub>12</sub> H <sub>25</sub> N) <sub>3x</sub> Al <sub>1x</sub> PO <sub>4</sub> *3H <sub>2</sub> O NagaitAla asSiaasSa 220z*0.045C <sub>12</sub> H <sub>26</sub> N*0.20H <sub>2</sub> O NagaitAl <sub>0.49</sub> Si <sub>0.98</sub> F <sub>0.45</sub> O <sub>2</sub>
HPSO-46 BARO-46 BARO-46	41- 558 50-1711	С	11.5 <sub>k</sub> 11.6 <sub>k</sub>	13.4 <sub>1</sub> 13.4 <sub>1</sub>	4.12 <sub>1</sub> 4.46 <sub>1</sub>	13.23 13.03	13.23 13.03	26.83 26.73	90.00 90.00 90.00	90.00	120.00 120.00		MgcAl <sub>22</sub> P <sub>26</sub> Sl <sub>2</sub> O <sub>112</sub> ((C <sub>3</sub> H <sub>1</sub> ) <sub>2</sub> NH) <sub>6</sub> C <sub>6</sub> cH <sub>1,8</sub> N <sub>6,10</sub> (Sl <sub>6,13</sub> Al <sub>9,56</sub> P <sub>6,27</sub> )O <sub>2</sub> *xH <sub>2</sub> O
AIPO4-52 AIPO4-52 AIPO4-52 AIPO4-52, calcined, AIPO4-52, calcined, AIPO4-52, calcined,	46- 338 46- 697 46- 698 50-1702	C i C	9.19g 9.14g 4.29g 9.27g	11.0g 10.8g 11.0g 11.0 <sub>7</sub>	6.87 <sub>6</sub> 6.79 <sub>6</sub> 9.21 <sub>5</sub> 6.86 <sub>4</sub>	13.73 13.73 13.78 13.72	13.73 13.78 13.78 13.78 13.72	28.95 28.95 28.95 28.95 29.68	90.00 90.00 90.00 90.00 90.00	00.00 00.00 00.00 00.00	120.00 120.00 120.00 120.00	H	$\begin{array}{l} \text{AlPO}_4 \\ \text{AlPO}_4 \\ \text{(Alg}_4 P_{0.5}) O_2 = 0.1 (C_2 H_8)_4 N H_2 P O_4 \\ \text{AlPO}_4 = x H_2 O \end{array}$
Partially renyurated							٠.					•	

Zeolite Structure Type Name-Code Cell Angles 3 Strongest Cell Parameters Crys. Chemical PDF# QM Zeolite Name Reflections Sys. Formula SAPO-56--AFX 90.00 90.00 120.00 H 52-1178 C 47- 763 O 13.76 19.95 Al<sub>23</sub>Si<sub>5</sub>P<sub>20</sub>O<sub>96</sub> C<sub>18</sub>H<sub>34</sub>N<sub>2</sub>-Al<sub>2</sub>O<sub>3</sub>-SiO<sub>2</sub>-Na<sub>2</sub>O-H<sub>2</sub>O 7.65<sub>6</sub> 4.07<sub>x</sub> 13,76 SAPO-66 10.2<sub>x</sub> 6.88<sub>4</sub> 10.1<sub>8</sub> CoAPO-50-AFY CoAPO-50 41- 559 C. 11.0 3.792 3.682 12.75 12.75 9.02 90.00 90.00 120.00 H Co3Al5P8O32((C3H7)2NH)3 AlPO4-H2—AHT 8.45<sub>E</sub> 8.08<sub>e</sub> AlPO4-H2 46- 557 C 4.07g 9.48 9.92 8.14 90.00 90.00 121.47 M AlaPaO24 4H2O -ANA Analcime 40- 474 51-1539 18-1180 5.43, 3.31, 3.43, 3.43, 3.44, 3.30<sub>8</sub> 5.44<sub>8</sub> 5.60<sub>6</sub> 5.59<sub>8</sub> 5.53<sub>5</sub> 3.43<sub>6</sub> 2.93<sub>6</sub> 2.92<sub>4</sub> 5.61<sub>5</sub> 13.71 18.72 13.71 90.00 90.00 90.00 (NH<sub>4</sub>,K)AlSi<sub>2</sub>O<sub>6</sub> (NH<sub>4</sub>,K,T;,Na)AlSi<sub>2</sub>O<sub>6</sub> Na(Si<sub>2</sub>Al)O<sub>8</sub>•H<sub>2</sub>O Na(Si<sub>2</sub>Al)O<sub>6</sub>•H<sub>2</sub>O 13.21 13.27 90.00 80.00 TOCC onioleucite, (Tl) 13.24 13.72 13.24 13.71 Analcime 41-1478 13.71 Annleima č 13.71 13.74 13.71 13.74 Analcime, (Cs,Ga) 13.74 90.00 Na7.93Ce5.86Ga13.87Si34.13O96\*10.04H2O 45- 181 2.93 90.00 90.00 Analcime, (Cs,Ga) Analcime, (Ga) Analcime, (Mg) Analcime, (NH4) 45- 182 44- 32 42-1378 3.43g 5.64x 3.52x 3.39x 5.47x 2.92g 3.45g 2.994 6.54s 3.31a 5.59g 2.944 2.033 2.896 13.70 13.77 14.71 13.57 13.70 13.77 14.71 13.57 90.00 90.00 90.00 90.00 90.00 No<sub>7.91</sub>Cs<sub>5.96</sub>Ga<sub>13.87</sub>Si<sub>34.13</sub>O<sub>96</sub> NaGaSi<sub>2</sub>O<sub>5</sub> • H<sub>2</sub>O Na<sub>10</sub>Mg<sub>2</sub>Al<sub>18</sub>Si<sub>32</sub>O<sub>96</sub> • 25H<sub>2</sub>O NH<sub>4</sub>Al(SiO<sub>3</sub>)<sub>2</sub> • H<sub>2</sub>O 13.70 90.00 90.00 40000 90.00 90.00 90.00 14- 19 45- 516 90.00 i 5.57 (NH4)1 Mga Ala SioOc+xHoO Analcime, (NH4) 13.24 13.24 19.75 90.00 3.43<sub>x</sub> 3.38<sub>x</sub> 3.28<sub>x</sub> 3.27<sub>x</sub> 43- 136 43-1489 46- 295 38-1423 5.60<sub>9</sub> 2.88<sub>4</sub> 3.50<sub>7</sub> 3.44<sub>7</sub> 3.19<sub>6</sub> 13.73 18.53 13.11 13.07 13.73 13.53 13.11 13.76 12.74 90.00 90.00 90.00 90.00 90.00 Na13Al24Si13P11Ose+16H2O Analcime, (P) Analcime, (Rb,Mg) 2.93 13.73 90.00 90.00 CCCTT Rb<sub>2</sub>MgSi<sub>5</sub>O<sub>12</sub> Cs<sub>16</sub>Be<sub>24</sub>P<sub>24</sub>O<sub>88</sub>H<sub>8</sub> KAISi<sub>2</sub>O<sub>8</sub> KBSi<sub>2</sub>O<sub>5</sub> Beryllophosphate-F 2,84<sub>4</sub> 2.70<sub>6</sub> 52- 129 Laucite 3.16. 12.63 12,63 90.00 90.00 25- 194 29- 407 47- 471 44- 47 46- 418 3.42<sub>x</sub> 3.42<sub>x</sub> 3.41<sub>x</sub> 3.39<sub>x</sub> 3.46<sub>x</sub> 2.91<sub>6</sub> 3.66<sub>5</sub> 3.64<sub>4</sub> 3.64<sub>6</sub> 3.70<sub>4</sub> 3.65<sub>3</sub> 2.91<sub>5</sub> 2.91<sub>4</sub> 2.90<sub>4</sub> 2.95<sub>4</sub> CsAlSioOa • xHoO Pollucite 13.67 13.67 13.67 90,00 90.00 90.00 CCCTC 13.67 13.65 13.58 13.84 13.67 13.65 13.58 13.84 13.67 13.65 13.62 13.84 90.00 90.00 90.00 90.00 90.00 90.00 90.00 90.00 Pollucite CaAlSiO<sub>4</sub> CaAlSiO<sub>4</sub> Ca<sub>2</sub>CuSi<sub>5</sub>O<sub>12</sub> Ca<sub>2</sub>Fe<sub>2</sub>Si<sub>4</sub>O<sub>12</sub> Pollucite Pollucite, (Cu) Pollucite, (Fe) 90.00 90.00 3.42<sub>g</sub> 3.32<sub>x</sub> 3.60<sub>x</sub> 3.26<sub>x</sub> 5.67<sub>x</sub> 2.91<sub>6</sub> 3.43<sub>7</sub> 3.85<sub>2</sub> 3.11<sub>8</sub> 3.46<sub>2</sub> 3.65g 2.87s 5.54s 2.97s 2.94s 13.66 13.27 13.50 13.90 13.80 13.66 13.72 13.50 13.90 13.80 43-1486 52-1498 6- 212 Cs2Fe2Si4O12 Pollucite,(Fe) C 18.66 90.00 90.00 90.00 CTCCC Tl-leucite Unnamed zeolite 13.27 13.50 13.90 13.80 90,00 90.00 90.00 90.00 TiAlSi<sub>2</sub>O<sub>6</sub> AlTi(SiO<sub>3</sub>)<sub>2</sub> Rb<sub>2</sub>Al<sub>2</sub>(SiO<sub>4</sub>)<sub>2</sub>•H<sub>2</sub>O K<sub>2</sub>Al<sub>2</sub>Si<sub>4</sub>O<sub>12</sub>•H<sub>2</sub>O 90.00 90.00 90.00 0 Unnamed zeolite 10- 411 11- 186 Unnamed zeolite 90.00 37- 347 37- 348 37- 349 37- 350 37-1349 3.48<sub>x</sub> 3.43<sub>x</sub> 3.28<sub>x</sub> 3.34<sub>x</sub> 3.33<sub>x</sub> 90.00 90.00 90.00 90.00 90.00 CsAlGe<sub>2</sub>O<sub>6</sub> Honomed zeolite 2.976 2.46 13.91 13.70 13.91 13.91 90.00 90.00 CCTTT 2.92<sub>6</sub> 3.47<sub>7</sub> 3.46<sub>6</sub> 3.58<sub>9</sub> Unnamed zeolite
Unnamed zeolite
Unnamed zeolite 2.42 13.70 13.88 90.00 90.00 RbAlGe<sub>2</sub>O<sub>4</sub> 13.13 13.35 13.30 90.00 90.00 90.00 90.00 90.00 90.00 5.42 13.13 KGaSia0 13.35 13.30 13.84 14.32 RbGaSi<sub>2</sub>O<sub>6</sub> KAlGe<sub>2</sub>O<sub>6</sub> 2.89<sub>6</sub> 5.51<sub>7</sub> Unnamed zeolite Na;BeSi;O<sub>12</sub>\*2H<sub>2</sub>O Ca;CdCa;O<sub>12</sub> Rb;CdSi;O<sub>13</sub> Rb;CdSi;O<sub>13</sub> 0.67Na;O\*0.01Ti;O\*Al<sub>2</sub>O<sub>3</sub>\*3.59SiO<sub>2</sub>\*1.57H<sub>2</sub>O 0.67Na;O\*0.3Li;O\*Ål<sub>2</sub>O<sub>3</sub>\*3.60SiO<sub>2</sub>\*1.91H<sub>2</sub>O 13.35 13.90 13.85 13.90 13.61 90.00 38- 326 41- 315 3.33, 2.85<sub>7</sub> 2.96<sub>2</sub> 1.70s 2.46s 90.00 90.00 90.00 00000 Unnamed zeplite 13.35 13.90 90.00 90.00 41- 315 41- 316 46- 216 46- 217 13.61 13.56 13.70 90.00 90.00 90.00 90,00 90.00 90.00 Unnamed zeolite 2.91 3.65 13.61 90.00 5.61<sub>x</sub> 5.61<sub>x</sub> 3.48<sub>x</sub> 3.45<sub>x</sub> Unnamed zeolite Unnamed žeolite 90.00 46- 218 46- 219 46- 220 50- 273 5- 616  $\begin{array}{l} 0.27Na_2O \circ 0.70Li_2O \circ Al_2O_3 \circ 3.62SiO_2 \circ 1.93H_2O \\ 0.67Na_2O \circ 0.42(NH_4)_2O \circ Al_2O_3 \circ 3.62SiO_2 \circ 1.19H_2O \\ 0.30Na_2O \circ 0.65(NH_4)_2O \circ Al_2O_3 \circ 3.61SiO_2 \circ 0.60H_2O \end{array}$ 3.40<sub>x</sub> 3.45<sub>x</sub> 2.85<sub>x</sub> 3.70<sub>5</sub> 1.74<sub>6</sub> 2.89<sub>6</sub> 3.35<sub>x</sub> 90.00 90.00 5.58. 13.56 13.56 13.56 90.00 Unnamed zeolite (Innamed zeplite 5.60, 3.35, Unnamed zeolit 4.85 Unnamed zeolite 3.46<sub>2</sub> 2.92<sub>4</sub> 2.95s 3.46¢ 90.00 90.00 90.00 90.00 13.84 6.89 13.84 6.89 13.84 18.07 90.00 CaSinTiO. 120.00 CaAl3(PO3OH)(SiO3OH)(OH) Viscite CnAl<sub>2</sub>Si<sub>6</sub>O<sub>15</sub>\*6H<sub>2</sub>O CaAl<sub>2</sub>Si<sub>4</sub>O<sub>15</sub>\*2H<sub>2</sub>O SrAl<sub>2</sub>Si<sub>4</sub>O<sub>15</sub>\*2H<sub>2</sub>O 0.65Na<sub>2</sub>O\*Al<sub>2</sub>O<sub>3</sub>\*1.11SiO<sub>2</sub>\*0.49P<sub>2</sub>O<sub>6</sub>\*2.07H<sub>2</sub>O 90.00 90.00 90.00 15- 139 42-1451 7.14<sub>2</sub> 3.39<sub>3</sub> 3.44<sub>8</sub> 3.14<sub>s</sub> 5.56<sub>6</sub> 5.60<sub>8</sub> 9.89 13.55 13.74 4.14a 3.41<sub>6</sub> 2.93<sub>8</sub> 2.93<sub>6</sub> 10.01 13.69 90.00 90.00 90.00 90.55 Wairakite M C C Wairakite 13.64 13.74 Zeolite I. (Sr) 17- 139 13.74 90.00 90.00 Zeolite P-C 38- 319 90.00 90,00 90.00 AlPO4-C -APC 6.49<sub>8</sub> 4.96<sub>5</sub> 5.97<sub>8</sub> 6.89<sub>x</sub> 3.06<sub>6</sub> 4.47<sub>6</sub> 4.67<sub>8</sub> 3.07<sub>9</sub> Al<sub>16</sub>P<sub>16</sub>O<sub>64</sub> • 24H<sub>2</sub>O Al<sub>16</sub>P<sub>16</sub>O<sub>64</sub> Al<sub>2</sub>O<sub>3</sub> • xP<sub>2</sub>O<sub>5</sub> 6.86<sub>x</sub> 7.05<sub>x</sub> 5.07<sub>x</sub> 4.26<sub>x</sub> AIPO4-C 41- 560 19.35 9.73 9.76 90.00 90.00 90.00 O 90.00 O 0000 AIPO4-C AIPO4-C AIPO4-H3 41- 561 45- 457 48- 34 19.82 10.03 90.00 90.00 90.00 19.24 9.75 9.80 90.00 90.00 AIPO4-D--APD 4.312 90.00 90.00 90.00 O AlPO4-D 41- 562 C 4.299 19.20 9.80 Al18P15O64 AlPO4-16-AST 90.00 C X 90.00 T X X AlpoP20O20(C7H13N)4 AlpO4\*1.225H2O 20SiO2\*2(C7H12NF) 41- 564 43- 566 48- 475 4.03<sub>x</sub> 4.06<sub>x</sub> 7.56<sub>x</sub> 4.03<sub>x</sub> 4.02<sub>x</sub> 7.73<sub>6</sub> 7.83<sub>6</sub> 3.93<sub>3</sub> 4.73<sub>6</sub> 4.75<sub>6</sub> 4.66<sub>2</sub> 4.73<sub>6</sub> 4.75<sub>8</sub> AIPO4-16 AIPO4-16 C 13.38 13.38 13.38 90.00 90.00 9.19 9.19 13.40 90.00 90.00 \* 0 0 Octadecasil Octadecaril 476 7.71, C0.08H1.82Al0.43N0.14O2P0.44Si0.09Ti0.07 = 0.14[C7H15N](Ti0.07Al0.43 TIAPSO-16 46-849 TiAPSO-16 46- 850 ٥ 7.76, 4.06s 3.013 x Alo.43O2Po.41Sio.00Tio.07 MAPO-39-ATN 11. MAPO-39 MAPO-38 46- 681 50-1704 0 90.00 90.00 T  $C_{0.324}H_{0.61}N_{0.034}Mg_{0.036}Al_{0.406}P_{0.433}O_{2}$ \* $xH_{2}O$  AlPO<sub>4</sub> 13.09 13.09 90.00 5.18 AlPO4-31--ATO Al<sub>2</sub>O<sub>3</sub> • 0.99P<sub>2</sub>O<sub>6</sub> • 0.56H<sub>2</sub>O • 0.18C<sub>6</sub>H<sub>15</sub>N AlPO<sub>4</sub> Al<sub>0.53</sub>Si<sub>0.04</sub>P<sub>0.43</sub>O<sub>2</sub> • 0.04C<sub>6</sub>H<sub>15</sub>N 43- 574 45- 177 47- 631 3.93<sub>x</sub> 10.4<sub>x</sub> 3.92<sub>x</sub> 10.4<sub>9</sub> 3.94<sub>4</sub> 10.4<sub>7</sub> AIP04-31 SAP0-31 SAP0-31 20.63 20.83 90.00 90,00 120.00 **MAPO-36-**--ATS MAPO36 MAPSO-36, calcined 46- 559 52-1177 Ç 10.8<sub>3</sub> 4.63<sub>6</sub> 13.15 13.08 21.58 21.47 5.16 5.15 90.00 90.00 91.84 90.00 M 91.87 90.00 M Mg1.0Al10.8P12.2O48 MgAl11Si0.5P11.5O48 4.66<sub>2</sub> 5.37<sub>4</sub> AIPO4-12-TAMU—ATT AIPO4-12 AIPO4-12-TAMU AIPO4-33 AIPO4-33 3.73<sub>6</sub> 8.42<sub>5</sub> 4.31<sub>2</sub> 4.90<sub>4</sub>  $\begin{array}{l} Ai_2O_3 \circ 1.02P_2O_5 \circ 0.75H_2O \circ 0.52C_2H_8N_2 \\ Ai_{12}P_{12}O_{49}((CH_9)_4NOH)_4 \\ C_{2.64}H_{7.92}N_{0.66}O_{0.23}Al_7(PO_4)_2 \circ 1.1H_2O \\ AiPO_4 \end{array}$ 6.66<sub>8</sub> 3.24<sub>5</sub> 3.26<sub>9</sub> 2.80<sub>4</sub> 43- 564 X X X 0000 41- 565 47- 711 47- 712 7.00<sub>x</sub> 6.98<sub>x</sub> 6,66<sub>x</sub> 10.33 14.64 90.00 90.00 90.00 AlPO4-25--ATV 9.45 90.00 8.41 90.00 Al<sub>12</sub>P<sub>12</sub>O<sub>48</sub> AlPO<sub>4</sub>

					. 4	Zeolite	Struc	ture T	ype N	ame-	-Cod	le	
Zeolite Name	PDF#	ΩМ		Strong flectio	est <sup>–</sup>		Param b			i Angl	es (	Crys.	Chemical Formula
						•	Al	PO-21-	-AWO				
AIPO-21 (Pytrolidine)	45- 184		3.88 <sub>z</sub>	8.78 <sub>x</sub>	3.53 <sub>x</sub>	8.67	17.56	9.19		107.75	90.00	M.	C4H9Al3NO12P3+H2O
AIP04-21 AIP04-21	43- 571 . 46- 179	,ç.	. 6.65 <sub>a</sub> · 8.88 <sub>a</sub>	·3.93 <sub>x</sub> 3.26 <sub>8</sub>	3.90 <sub>3</sub> 3.89 <sub>7</sub>	· 8,47	17.75	9.06	90.00	106.78	90.00	X M	Al <sub>2</sub> O <sub>3</sub> • 1.05P <sub>2</sub> O <sub>5</sub> • 0.E3H <sub>2</sub> O • 0.67C <sub>4</sub> H <sub>2</sub> N (C <sub>2</sub> H <sub>5</sub> N <sub>2</sub> )Al <sub>2</sub> P <sub>3</sub> O <sub>12</sub> • H <sub>2</sub> O
AIPO4-21	45- 455	õ	3.86 <sub>x</sub>	8.71,	3.307	-•		•	•		, 00.00	x	Al <sub>2</sub> O <sub>3</sub> •xP <sub>2</sub> O <sub>6</sub>
GaPO4-21	<b>45- 180</b>	С	9.07 <sub>x</sub>	8.834	8.51.	<b>8.70</b>	18.15	9.09	90.00	107.28	90.00	M	Ga <sub>3</sub> (PO <sub>4</sub> ) <sub>3</sub> C <sub>3</sub> H <sub>9</sub> N•H <sub>2</sub> O
ii.			•				AU	PO4-22	-AWW	V			•
AIPO4-22	41- 567	С	4.79 <sub>x</sub>	9.636	4.31 <sub>6</sub>	13.63	13.63	15.46	90.00	90.00	90.00	T	Al24P24O96(PO5(OH))-(C7H14N)4
AIPO4-22 AIPO4-22	43- 570 45- 456	0	4.80 <sub>x</sub> 4.01 <sub>x</sub>	9.72 <sub>8</sub> 3.07 <sub>8</sub>	4.852	•						X	Al <sub>2</sub> O <sub>3</sub> • 1.03P <sub>2</sub> O <sub>5</sub> • 0.81H <sub>2</sub> O • 0.31C <sub>5</sub> H <sub>20</sub> N <sub>2</sub> Al <sub>2</sub> O <sub>3</sub> • xP <sub>2</sub> O <sub>5</sub>
AIPO4-22	47- 598	Õ	9.65	4.809	4.356							x	AIPO4
	_							Beta-	BEA				84 - 1 4 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1
Techernichite	46-1396	0	4.03,	11.62	3.162		•					x	(Ca,Na)SigAl <sub>2</sub> O <sub>15</sub> •8H <sub>2</sub> O
Unnamed zeolite	49-1838	0	4.04 <sub>x</sub> 3.89 <sub>x</sub>	3.062	8.17 <sub>2</sub> 4.07 <sub>2</sub>							X X	Na <sub>0.25</sub> K <sub>0.05</sub> Ca <sub>0.92</sub> Mg <sub>0.01</sub> Al <sub>2.19</sub> Si <sub>8.82</sub> O <sub>18</sub> *8.35H <sub>2</sub> O Na <sub>9</sub> Al <sub>2</sub> B <sub>2</sub> O <sub>3</sub> SiO <sub>4</sub>
Zeolite Beta Zeolite Beta	48- 38 48- 74	·ŏ	3.99 <sub>a</sub>	11.5 <sub>9</sub> 11.6 <sub>8</sub>	4.218							x	Na <sub>2</sub> O-Al <sub>2</sub> O <sub>3</sub> -SiO <sub>3</sub>
(a)					•		· R	ikitaite	RTW				•
Bikitaite	14- 168	i	3.46,	3.37 <sub>x</sub>	4.209	8.61	4.96	7.61	90.00		90.00	<u>.</u>	LiAlSi <sub>2</sub> O <sub>5</sub> •H <sub>2</sub> O
S. Editoraire	24- 200	•	0.403	0.0.q	2.209	0.02					54.50	••	among of 110
								oggsite		•		_	
Boggsite	42-1379	С	3.86	11.39	3.377	20.24	23.80	12.80	90.00	90.00	90.00	0	Na <sub>3.7</sub> Ca <sub>7.4</sub> Al <sub>38.6</sub> Si <sub>77.6</sub> O <sub>192</sub> •74H <sub>2</sub> O
<b>.</b>						Be	ryllo	phosph	ate-H-	-BPI	Ħ		
Beryllophosphate H	41- 568	C	10.9 <sub>k</sub>	12.6	2.794	12.58	12.58	12.45	90.00		120.00	H	Na <sub>7</sub> K <sub>2</sub> Be <sub>14</sub> P <sub>14</sub> O <sub>56</sub> •20H <sub>2</sub> O
E-Beryllophosphate-H Unnamed zeolite	46- 296 48- 503	i	10.9 <sub>k</sub> 11.7 <sub>k</sub>	12.4s 13.47	2.79 <sub>8</sub> 3.00 <sub>5</sub>	12.59 13.51	12.59 13.51	12.46 13.41	90.00 90.00		120.00 120.00	H	Na7K7Be14P14O56*20H2O (NHJ2AI2Si2O8*3.1H2O
			-	-	-		Dav		e DD	127			
44	41-1356	*	2.92.	4.00	0.10	6.78	17.52	vosterii 7.75	90.00	94.47	90.00	M	Sr(Si <sub>6</sub> A) <sub>2</sub> )O <sub>16</sub> =5H <sub>2</sub> O
Brewstorite	41-1350	-	2.70g	4.667	2.195	0.70					30.00	147	D1 (D18/D2)/O18 - 01/20
								ncrinit		_			
Cancrinite	34- 176 46-1332	Ç	3.21 <sub>x</sub> 3.22 <sub>x</sub>	4.63 <sub>9</sub> 3.64 <sub>8</sub>	6.80 <sub>5</sub> 2.78 <sub>6</sub>	12.59 12.60	12.59 12.60	5.12 5.13	90.00 90.00		120.00 120.00	H	Na <sub>6</sub> Ca <sub>1.5</sub> Al <sub>6</sub> Si <sub>6</sub> O <sub>24</sub> (CO <sub>3</sub> ) <sub>1.6</sub> Na <sub>6</sub> Ca <sub>2</sub> Al <sub>6</sub> Si <sub>6</sub> O <sub>24</sub> (CO <sub>3</sub> ) <sub>2</sub> •2H <sub>2</sub> O
Cancrinite (Cs.Li.Tl)	48- 520	Ô	3.16	4.544	2.224	12.45	12.45	5.00	90.00	90.00	120.00	H	Lia 88Tl 119Cs0,78Al6,97Sia 23O24*xH2O
CiCancrinite, (Li,Cs) A Cancrinite, (Li,Cs)	45- 124 47- 252	Ç	3.15 <sub>x</sub> 3.15 <sub>x</sub>	10.8 <sub>7</sub> 3.66 <sub>5</sub>	. 3.65s 8.59 <sub>4</sub>	12.43 12.43	12.43 12.43	4.97 4.97	90,00	90.00 90.00	120.00 120.00	H	Li <sub>4.56</sub> Cs <sub>1.6</sub> Al <sub>6</sub> Si <sub>6</sub> O <sub>24</sub> • 5.58H <sub>2</sub> O Li <sub>4.56</sub> Cs <sub>1.60</sub> Al <sub>6</sub> Si <sub>6</sub> O <sub>24</sub> • 4.9H <sub>2</sub> O
Cancrinite, (Li,Tl)	47- 253	j	3.16.	4.533	2.703	12.44	12.44	4.99	90.00	90.00	120.00	Ħ	Liz vaTla zaAla naSia 12004 • 2H2O
Davyne ECR-5	50-1578 47- 235	*	3.66 <sub>x</sub> 4.58 <sub>x</sub>	4.79 <sub>7</sub> 3.62 <sub>2</sub>	3.27 <sub>7</sub> 3.19 <sub>x</sub>	12.67	12,67	5.33	90.00	90.00	120.00	H	(Na,Ca) <sub>8</sub> Al <sub>6</sub> Si <sub>6</sub> O <sub>24</sub> (Cl,CO <sub>3</sub> ,SO <sub>4</sub> ) <sub>3</sub> Li <sub>1.8</sub> Na <sub>1.16</sub> Al <sub>2</sub> Si <sub>2.68</sub> O <sub>10.21</sub> •xH <sub>2</sub> O
Microsommite	20- 743	í	4.81 <sub>x</sub>	3.69 <sub>x</sub>	$3.29_{x}$	22,12	22,12	5.34	90.00		120.00	H	(Na,Ca,K)g(Sf,Al)12O24Cl2.5
Unnamed zeolite	31-1272	0	3.25,	4.727	3.667	12.70	12.70	5.17	90.00		120.00		1.06Na <sub>2</sub> O+Al <sub>2</sub> O <sub>3</sub> +1.60SiO <sub>2</sub> +1.60H <sub>2</sub> O
Unnamed zeolite	38- 518 38- 514	ŏ	3.24 <sub>x</sub> 3.68 <sub>x</sub>	3.66 <sub>8</sub> 6.37 <sub>6</sub>	4.70 <sub>7</sub> 4.72 <sub>6</sub>	12.69 12.73	12,69 12,73	5.20 5.02	90.00	90.00 90.00	120.00	H	Nag(Al <sub>6</sub> Si <sub>6</sub> O <sub>24</sub> )XNO <sub>2</sub> ) <sub>2</sub> •4H <sub>2</sub> O Nag(Al <sub>6</sub> Si <sub>6</sub> O <sub>24</sub> )S <sub>2</sub> O <sub>3</sub> •3H <sub>2</sub> O
Unnamed zeolite Unnamed zeolite	38- 515 48-1862	i *	3.66 <sub>z</sub> 3.64 <sub>z</sub>	6.36 <sub>6</sub> 3.22 <sub>9</sub>	3.24 <sub>6</sub> 6.30 <sub>9</sub>	12.67 12.62	12.67 12.62	5.19 5.13	90.00	90.00 90.00	120.00 120.00		Nag(Al <sub>6</sub> Si <sub>6</sub> O <sub>24</sub> )S•4H <sub>2</sub> O Na <sub>6</sub> CaAl <sub>6</sub> Si <sub>6</sub> (CO <sub>2</sub> )O <sub>24</sub> 42H <sub>2</sub> O
Vishnevite	46-1333	ŝ	3.27,	3.70,	2.777	12.79	12.79	5.24	90.00	90.00	120.00		NagAl <sub>6</sub> Si <sub>6</sub> O <sub>24</sub> (SO <sub>4</sub> )*2H <sub>2</sub> O
					(	Cesium	Alum	inosili	cate (A	raki	i)—C	AS	•
Aluminosilicate, (Cs)	41- 569	С	8.61 <sub>z</sub>	3.596	4.115	16.78	13.83	5.02	90.00	90.00	90.00		Ca4Al4Si20O48
					•				CET				
	£1 1000	,	10.1	10.0-	4.40-	13.67	5.02	CIT-5- 25.56	<u>-CFI</u> 90.00	90.00	90.00	0	SiO <sub>2</sub>
CIT-6	51-1382	i	12.1.	12.87	4.423								oro;
								lium-Pl			–CG	_	
Cobalt-Gallium-Phosphate-5	49- 618	С	8.84 <sub>x</sub>	3.845	3.594	15.00	17.69	15.57	90.00	97.24	90.00	М	C <sub>12</sub> H <sub>28</sub> N <sub>4</sub> • (Co <sub>4</sub> Ga <sub>5</sub> P <sub>9</sub> O <sub>28</sub> )
						Cobal	t-Gall	lium-Pl	hospha	ıte-6-	_CG	S	
Cobalt-Gallium-Phosphate-6	49- 622	C	5.39 <sub>x</sub>	7.70 <sub>x</sub>	10.8 <sub>x</sub>	14.86	16.31	6.73	90.00	90.24	90.00	M	C <sub>28</sub> H <sub>56</sub> N <sub>4</sub> *(Co <sub>4</sub> Ga <sub>12</sub> P <sub>16</sub> O <sub>84</sub> )
							C	abazit	е—СН	A			
AIPO4-84	47- 166	0	9.21 <sub>s</sub>	4.254	5.472		<u></u>			<b>=</b>		x	0.4((CH <sub>3</sub> CH <sub>2</sub> ) <sub>4</sub> NOH)+Al <sub>2</sub> O <sub>3</sub> +1.18P <sub>2</sub> O <sub>5</sub> +1.77H <sub>2</sub> O
AIPO4-94	47- 167		9.11 <sub>x</sub>	8.663	4.55 <sub>3</sub> 2.91 <sub>7</sub>	10.84	17.18	10.48	90.00	90.00	90.00		AIPO <sub>4</sub> *xH <sub>2</sub> O AIPO <sub>4</sub>
AIPO4-34 H_AIPO4-34	47- 168 47- 184		9.40 <sub>x</sub> 9.26 <sub>x</sub>	4.29 <sub>9</sub> 4.32 <sub>2</sub>	3.55g	13,80	13.80	14.90	90.00	90.00	120.00	H	C <sub>0.27</sub> H <sub>0.81</sub> N <sub>0.09</sub> Co <sub>0.09</sub> Al <sub>0.45</sub> Si <sub>0.07</sub> P <sub>0.43</sub> O <sub>2</sub> =0.10H <sub>2</sub> O
CAP80-34	47- 701		9.26,	4.316	5.524							X	Ala.46Cra.01Sio.a6Po.48O2*0.07C8H31NO*0.1H2O
Chabazite Chabazite	34- 137 52- 784	*	4.32 <sub>x</sub> 9.17 <sub>x</sub>	2.93 <sub>9</sub> 6.76 <sub>3</sub>	9.34 <sub>6</sub> 4.24 <sub>2</sub>	13.78 13.52	13.78 13.52	14. <del>99</del> 14.73	90.00 90.00	90.00 90.00	120.00 120.00		Ca <sub>2</sub> Al <sub>4</sub> Si <sub>8</sub> O <sub>24</sub> • 12H <sub>2</sub> O SiO <sub>2</sub>
Chabazite (Al)	44- 248 43- 137	0	2.98 <sub>x</sub> 9.37 <sub>x</sub>	3.67 <sub>x</sub> 2.93 <sub>6</sub>	2.60s 4.334	13.80	13.80	15.07	90.00	90.00	120.00	Х	NgAlSiO4*xH2O BalgAlugBigzOz4*9.7H2O
Chabazite, (Ba) Chabazite, (Co,P)	45- 137		9.37,	4.323	6.90 <sub>2</sub>	13.80	13.80	14.85	90.00	90.00	120.00		C00.16(Sig_16Al0.84P0.84O4) = 0.18(C3H-(NH2)) = 0.2H2O
Chabazite, (Ce)	44- 45		2.94 <sub>x</sub>	4.347	6.925	13,84	13.84	15.10	80.00	90.00	120.00		Ca3.oCao.4Al3.BSi8.2O24*9.5H2O
Chabazite, (Cs) Chabazite, (K)	44- 46 12- 194		6.86 <u>.</u> 2.93 <sub>x</sub>	4.31 <sub>7</sub> 4.32 <sub>6</sub>	2.91 <sub>7</sub> 1.72 <sub>6</sub>	13.72 13.85	13.72 13.85	15.18 15.50	90.00	90.00 90.00	120.00 120.00		C53,0Ca0,4Al3,2Si5,3O24 K2AlyO4SiO2*H2O
Chabazite, (Sr)	45-1427	i	9.43	2.93	4.33a 9.36s	13.76 13.80	18.76 13.80	15.28 15.10	90.00 90.00	90.00 90.00	120.00 120.00	R	(Ca,K,Sr);Al4Si;O24+12H;O NaAlSi;O6+8H;O
Chabazite-Na CoAPO-84	19-1178 50-1479		2.93 <sub>x</sub> 4.32 <sub>x</sub>	4.82 <sub>7</sub> 2.93 <sub>6</sub>	9.308	13.60	13.82	14.79	90.00	90.00	120.00		(P <sub>0.47</sub> Al <sub>0.40</sub> Co <sub>0.13</sub> )O <sub>2</sub>
CoAPO-34	50-1480	) <u>i</u>	4.31	2.93	9.265	18.81	13.81	14.82	90.00	90.00	120.00	R	(P <sub>0,53</sub> Al <sub>0,21</sub> Co <sub>0,25</sub> )O <sub>2</sub>
CoAPO-34 CoAPO-44	50-1481 46- 339	C	4.33 <sub>x</sub> 9.34 <sub>x</sub>	2.63 <sub>7</sub> 6.82 <sub>3</sub>	9.33 <sub>6</sub> 4.28 <sub>2</sub>	13.83 13.63	13.83 18.63	14.87 15.28	90.00 90.01	90.00 89.99	120.00 119.98	A	(Po.esAlo23Coo29)O2 ColsAl13,5P18O73
CoAPSO-44	48- 340	С	9.35 <sub>x</sub>	6.823	4.292	13.64	13.64	16.29	89.99	89.99	119.98	A	Co23Si3Al1E1P16O72
Coapso-47	46- 342 47- 429		9.35 <sub>x</sub> 9.29 <sub>x</sub>	6.90 <sub>2</sub> 4.32 <sub>6</sub>	4.33 <sub>1</sub> 3.55 <sub>4</sub>	13.80 13.78	13.81 13.78	14.99 14.85	90.00 90.00	90.08 90.00	120.07 120.00		Co <sub>2,6</sub> Si <sub>4,6</sub> Al <sub>15,5</sub> P <sub>12,6</sub> O <sub>72</sub> (Si <sub>0,66</sub> Al <sub>4,06</sub> P <sub>3,04</sub> )O <sub>16</sub> *xH <sub>2</sub> O
7 SAPO-34	47- 617	0	9.31,	4.317	5.52	220					•	X	AlosoSio.10Po.40O2*0.08CeH20N*0.17H2O
SAPO-44 SAPO-44	47- 629 47- 630		9.31 <sub>2</sub> 9.30 <sub>2</sub>	4.24 <sub>x</sub> 4.28 <sub>5</sub>	2.89 <sub>8</sub> 6.84 <sub>5</sub>							X	Al <sub>0.48</sub> Si <sub>0.11</sub> P <sub>0.41</sub> O <sub>3</sub> • 0.14C <sub>6</sub> H <sub>13</sub> N • 0.16H <sub>2</sub> O Al <sub>0.48</sub> Si <sub>0.11</sub> P <sub>0.41</sub> O <sub>3</sub>
SAPO-47	41- 570	С	9.33,	4.318	3.594	13.73	13.73	15.05	90.00	90.00	120.00		Ale8114P46O24(CeH12NH2)14 • 2.5H2O
SSZ-13 TIAPSO-34	47- 762 46- 851		4.27 <sub>2</sub> 9.41 <sub>2</sub>	5.47 <sub>7</sub> 4.33 <sub>x</sub>	9.23g 5.54 <sub>8</sub>				•			X	C <sub>12</sub> H <sub>24</sub> N-Al <sub>2</sub> O <sub>3</sub> -SiO <sub>2</sub> -Na <sub>2</sub> O-H <sub>2</sub> O C <sub>0.824</sub> H <sub>2.05</sub> Al <sub>0.68</sub> N <sub>0.103</sub> O <sub>2</sub> P <sub>0.41</sub> Si <sub>0.13</sub> Ti <sub>0.70</sub> *0.103[(C <sub>2</sub> H <sub>5</sub> ) <sub>4</sub> N](Ti <sub>0.10</sub>
Tiapso-34	46- 852	. 0	9.31 <sub>x</sub>	4.27	6.813							X	Al <sub>0.48</sub> O <sub>3</sub> P <sub>0.41</sub> Bi <sub>0.11</sub> Ti <sub>0.10</sub> C <sub>6</sub> H <sub>13</sub> N-Al <sub>2</sub> O <sub>5</sub> -P <sub>2</sub> O <sub>5</sub> -BiO <sub>2</sub> -TiO <sub>2</sub>
TiAPSO-44	46- 856 47- 356		4.27 <sub>z</sub> 2.92 <sub>x</sub>	9.31 <sub>8</sub> 3.68 <sub>5</sub>	4.04a 9.48 <sub>4</sub>	13.73	13.79	15.59	90.00	90.00	120.00		Na <sub>29.6</sub> Al <sub>70.6</sub> Si <sub>41.2</sub> O <sub>207.2</sub>
Unnamed reclite Willhendersonite	35- 643	i i	9.16.	2.918	2.80₺	9.18	9.14	9.48	92.50	92.31	90.05	A	KCaAl <sub>3</sub> Si <sub>3</sub> O <sub>12</sub> •5H <sub>2</sub> O
S ZK-14, (K,TMA) Z ZYT-6	37- 792 44-1389		2.93, 9.30,	2.89 <sub>5</sub> 4.32 <sub>2</sub>	1.81 <sub>4</sub> 6.89 <sub>g</sub>	13.80 13.78	13.80	15.12 14.85	90.00 90.00	90.00		). R	K <sub>10,6</sub> Al <sub>11,1</sub> O <sub>72</sub> Si <sub>24,9</sub> • 25H <sub>2</sub> O .(H <sub>3</sub> O(Al <sub>4</sub> SiP <sub>3</sub> O <sub>16</sub> )) <sub>0,6</sub> • 0.96H <sub>2</sub> O
Zeolite Co(APSO)44	49- 656		18.2,	4.543	4.652			-				X	Coo.o4Alo.46Sio.05Po.44O2 • 0.48H2O • 0.43C6H12N
85:													

				7 6.				ructure				de	
Zeolite Name	PDF#	# QN		3 Stroi Reflect		a	ell Pa	rameters c	. α	Cell A		Cry	s. Chemical s. Formula
Zeolito G, (Sr) Zeolite K-G1	17- 142 44- 250	2	2.91, 2.92,		s 9.43 <sub>6</sub>	13.6	7 13.0	97 15.46	90.00	0 90.	00 120.0		SrAl <sub>2</sub> Si <sub>4</sub> O <sub>12</sub> •6H <sub>2</sub> O
Zcolita.P-G Zeolita P-R	38- 321 38- 322	1	9.46	<sub>*</sub> 2.95	4.367	13.8			90.00	90.0	00 120.0	O R	KAISiO4*xH <sub>2</sub> O 0.54K <sub>2</sub> O*Al <sub>2</sub> O <sub>3</sub> *1.54SiO <sub>2</sub> *0.36P <sub>2</sub> O <sub>5</sub> *3.82H <sub>2</sub> O
2001101-11	03-022		9.46,	2.94	4.358	` 13.8	6 13.6	36 15.02	90.00	90.0	00 120.0	O R	0.84Na <sub>2</sub> O • Al <sub>2</sub> O <sub>8</sub> • 1.92SiO <sub>2</sub> • 0.3P <sub>2</sub> O <sub>8</sub> • 4.12H <sub>2</sub> O
Chiavennite	35- 602	2	15.7,	. 9 an	. 9 00.	. 0.7	_	hiaven		CHI			
•		•		2.90	3.28	8.7	8 31.5		90.00		00.DC	0	CaMn <sup>-1</sup> Bc <sub>2</sub> Si <sub>5</sub> O <sub>15</sub> (OH) <sub>2</sub> •2H <sub>2</sub> O
Cloverite	46- 558	С	26.4	9.32	, 18.6 <sub>g</sub>	.· 52.7	1 52.7		ite—CL				-
Cloverite	50-1705	Č	25.8	9.14	18.32	51.7			90.00				Gn96P96O355(OH)24F24 2C17H14FN+Ga4P8O33
								CIT-1	-CON	7			
CIT-1 CIT-1	50-1694 50-1703		11.3 <sub>z</sub> 11.3 <sub>z</sub>	11.57		22.6		8 12.37	90.00	68.8			Si <sub>66</sub> O <sub>112</sub>
CIT-1 SSZ-26	52- 110 47- 355	0	4.02	3.84 <sub>x</sub>	4.339	22.63 22.63			90,00 90.00				Si <sub>56</sub> O <sub>112</sub> C <sub>12</sub> H <sub>24</sub> BNO <sub>2</sub> Si • H <sub>2</sub> O
SSZ-26	47- 674		11.4 <sub>x</sub> 3.88 <sub>x</sub>									X	Na <sub>2</sub> O-Al <sub>2</sub> O <sub>3</sub> -SiO <sub>2</sub> (C <sub>19</sub> H <sub>36</sub> N <sub>2</sub> )-(Na <sub>2</sub> Al <sub>2</sub> SiO <sub>4</sub> )-H <sub>2</sub> O
SSZ-33	52- 109	0	11.9,	4.355	. 4.044	23.90	13.2	9 12.32	90.00	66.9	3 90.00		(BSi)O <sub>2</sub>
						CF	iiral	Zincop	hospho	rte-	CZP		
Chiral Zincophosphate	49- 621	С	7.78 <sub>g</sub>	3.06 <sub>g</sub>	5.80 <sub>g</sub>	10.48			90.00			н	Na <sub>12</sub> (Zn <sub>12</sub> P <sub>12</sub> O <sub>48</sub> ) • 12H <sub>2</sub> O
							$\boldsymbol{D}$	achiar	diteD	AC			
Dachiardito Dachiardite, (Na)	18- 467 30-1149	i	3.45 <sub>x</sub> 8.45 <sub>x</sub>	3.20 <sub>4</sub> 4.88 <sub>9</sub>	1.87 <sub>8</sub> 8.86 <sub>8</sub>	18.65 18.64			90.00				(Ca,Na,K,Mg)4(Si,Al)24O48+13H2O
		-		.,,,,	0.008				90.00			М	Na4(Al4Si20)O48 • 13H2O
Doca-dodecasil-3R	38- 651	i	5.18,	3.407	5.776	13.89		Dodecc 40.99	90.00			_	
Occa-dodecasil-3R Unnamed zeolite	41- 571 48- 235	C *	11.5 5.15	5.18 <sub>8</sub> 3.39 <sub>7</sub>	13.6 <sub>8</sub> 5.71 <sub>6</sub>	13.86	13.86	40.89	90.00	90.00	120.00	R	SiO <sub>2</sub> Si <sub>120</sub> O <sub>240</sub> (N <sub>2)4</sub> (C <sub>10</sub> H <sub>17</sub> N) <sub>6</sub>
Unnamed zeolite Unnamed zeolite	48- 236 49- 75	*	5.15 <sub>x</sub>	5.714	4.464	13.73 13.72	13.72	41.31	90.00 90.00	90.00 90.00	120.00	H	120SiO <sub>2</sub> • 12Br <sub>2</sub> 120SiO <sub>2</sub> • 6I <sub>2</sub>
Unnamed zeolite	49- 76	*	5.16 <sub>x</sub> 5.17 <sub>x</sub>	4.47 <sub>7</sub> 5.75 <sub>7</sub>	3.39 <sub>7</sub> 3.39 <sub>6</sub>	13.74 13.84			90.00 90.00	90.00			120SiO2*xIC
			-	•			_				120.00	Н	120SiO <sub>2</sub> •6S <sub>7</sub>
Dodecasil-1H	41- 572	С	11.2 <sub>z</sub>	6.89,	11.97	13.78		decasil	90.00	90.00	120.00	н	
								UTD-11			. 120.00		Si34O63(N2)3(N2)2(C6H10NH)
UTD-1	50- 57	i	14.7*	11.54	4.212	18.98	8.41		FDON 90.00	<u>v</u> 90.00	90.00	0	Si <sub>64</sub> O <sub>128</sub>
UTD-1 as synthesized	52- 160	o	4.19,	4.036	6.06					50.00	. 50.00	x	xC <sub>20</sub> H <sub>30</sub> C <sub>0</sub> OH•SiQ <sub>2</sub> •zH <sub>2</sub> O
Bellbergite	45.1400						$\underline{T}$	MA-E(A	B)EA	1B			•
EAB	45-1482 41- 573	i C	8.80 <sub>±</sub> ,3.77 <sub>±</sub>	6.58 <sub>8</sub> 9.17 <sub>8</sub>	2.95 <sub>7</sub> 3.61 <sub>6</sub>	13.24 13.28	13.24 13.28		90.00 90.00	90,00		H H	(K,Ba,Sr) <sub>2</sub> Sr <sub>2</sub> Ca <sub>2</sub> (Ca,Na) <sub>4</sub> Al <sub>18</sub> Si <sub>18</sub> O <sub>72</sub> •30H <sub>2</sub> O
Zeolite E Zeolite E, (K)	23-1895 44-1392	С	9.21 <sub>x</sub> 6.54 <sub>x</sub>	6.66 <sub>x</sub> 9.06 <sub>9</sub>	3.78 <sub>6</sub> 4.12 <sub>4</sub>	13.27 13.07	13.27 13.07	15.23	90.00	90.00	120.00	H	Nas.1((CH <sub>3</sub> )4N)2.2Ala.4Si26.6O72(OH)0.9 • 25H <sub>2</sub> O C12H36AlaN3Na7O72Si27 • 17H <sub>2</sub> O
Zcolite E, (Na,TMA)	35-1502	i	3.78 <sub>x</sub>	9.20 <sub>8</sub>	3.627	13.28	13.28	15.21	90.00	90.00		H	K9Al9.7Si26.2O72 C8H24Al9N2N27O72Si21*26H2O
W313 - 1 - 2							E	lington	ite—El	DI			
Beryllophosphate-E Edingtonite	46- 294 -25- 60	í ★	6.48 <u>.</u> 6.51 <sub>x</sub>	2.78 <sub>2</sub> 4.70 <sub>7</sub>	2.87 <sub>4</sub> 3.59 <sub>7</sub>	9.17 9.53	9.17 9.65	12.30 6.51	90.00	90.00		T O	K <sub>10</sub> Be <sub>10</sub> P <sub>10</sub> O <sub>40</sub> • 10H <sub>2</sub> O
Edingtonite, (K.Cl) Edingtonite, (Li)	45- 123 27-1212	C	3.08 <sub>x</sub> 3.59 <sub>x</sub>	3.05 <sub>x</sub> 2.75 <sub>x</sub>	2.79 <sub>9</sub> 6.54 <sub>5</sub>	9.76 9.57	9.76 9.57	6.49 6.54	90.00	90.00	90.00	T	BaAl <sub>2</sub> Si <sub>3</sub> O <sub>10</sub> -4H <sub>2</sub> O K <sub>2</sub> Al <sub>2</sub> Si <sub>3</sub> O <sub>10</sub> (KCI)
Phase F. (Be,Li) Species P. (Na)	30- 742 25- 777	0	7.01,	3.08 <sub>x</sub>	2.82	0.01	5.51	0.04	90.00	90.00	90.00	T X	LiBa <sub>0.5</sub> Al <sub>2</sub> Si <sub>3</sub> O <sub>10</sub> =4H <sub>2</sub> O (Ba,Li)*Al*SiO <sub>4</sub> *H <sub>2</sub> O
Unnamed zeolite Zeolite D, (Rb)	22-1809		3.15 <sub>x</sub> 3.67 <sub>x</sub>	7.10 <sub>4</sub> 4.49 <sub>4</sub>	3.03 <sub>7</sub> 6.36 <sub>4</sub>	8.98	8.98	8.98	90.00	90.00	90.00	X T	NasAlzSizOs*xHzO C4H12AlNO12Si3
Zeolite F	38- 217 44-1388	Ċ	2.99 <sub>x</sub> 2.85 <sub>x</sub> ·	3.11 <sub>9</sub> 3.11 <sub>8</sub>	2.84 <sub>7</sub> 2.99 <sub>4</sub>	9.95 9.98	9.95 9.98	13.20 13.21	90.00 90.00	90.00 90.00	90.00	T	RbAlSiO <sub>4</sub> •H <sub>2</sub> O
Zeolite F, (K) Zeolite K-F, (Na)	38- 216 39- 217	i C	2.96 <sub>a</sub> 7.11 <sub>g</sub>	3.07a	2.81	9.83	9.83	13.09	90,00	90.00	90.00	T	Rb <sub>9.8</sub> Al <sub>10</sub> Si <sub>10</sub> O <sub>40</sub> • 6.44H <sub>2</sub> O KAlSiO <sub>4</sub> • 1.5H <sub>2</sub> O
Zeolite N	50- 90	*	2.82	3.14g 3.09g	2.87 <sub>8</sub> 2.96 <sub>7</sub>	10.06 9.90	10.06 9.89	6.68 13.09	90,00 90.00	90.00 90.00	90.00 90.00	T O	Na5Al <sub>6</sub> Si <sub>5</sub> O <sub>20</sub> • 9H <sub>2</sub> O K <sub>12</sub> Al <sub>10</sub> Si <sub>10</sub> O <sub>40</sub> Cl <sub>2</sub> • 8H <sub>2</sub> O
								EMC-2-	-EMT				13-13-13-13-13-13
CSZ-1 CSZ-1	47- 722 47- 723	0	3.40 <sub>x</sub> 14.1 <sub>x</sub>	14.2 <sub>9</sub> 15.1 <sub>6</sub>	3.00 <sub>7</sub> 3.70 <sub>6</sub>	17.43	17.43	28.36	80.00	90.00	120.00	н	C50.64Na1.04Al2Si4.29O12.42
ECR-30 EMT (Na)	47- 655 46- 566	Č	15.0 <sub>x</sub> 15.1 <sub>e</sub>	14.2 <sub>8</sub>	5.653	17.42 17.30	17.42 17.30	28.41 28.78	90.00 90.00	90.00 90.00	120.00 120.00	н,	Na-TI-AI-Si-O C7.84H20,16N2,12Naa,88Al2Si10.02O25.04
Unnamed zcolite	48- 504	*	15.0 <sub>x</sub>	14.2 <sub>g</sub> 14.2 <sub>6</sub>	13.3 <sub>g</sub> 8.02 <sub>4</sub>	17.45 17.35	17.45 17.35	28.46 28.43	90.00 90.00	90.00	120.00 120.00	п.	Na19.36Al22.27Si73.73O192 Na1.96Al2Si6.84O17.05
ZSM-20 ZSM-20	43- 46 47- 553	0	15.1, 14.7 <u>.</u>	14.3 <sub>2</sub> 13.9 <sub>8</sub>	5.68 <sub>6</sub> 5.62 <sub>4</sub>	17.30	17.30	28.60	00 00			x	C2.56H7.68Al2No.64Na1.44O20.24Sia.1
ZSM-20 ZSM-20, dealuminated	47- 554 45- 111	O i	3.27, 14.1,	2.84 <sub>x</sub> 14.8 <sub>x</sub>	2.85 <sub>9</sub> 5.60 <sub>8</sub>	17.30 17.17	17.30	28.60	90.00 90.00	90.00 90.00	120.00 120.00	H (	C <sub>20</sub> H <sub>10</sub> N-Na <sub>2</sub> O-Al <sub>2</sub> O <sub>3</sub> -SiO <sub>2</sub> -H <sub>2</sub> O C <sub>20</sub> H <sub>10</sub> N-Na <sub>2</sub> O-Al <sub>2</sub> O <sub>3</sub> -SiO <sub>2</sub> -H <sub>2</sub> O
ZSM-3	38- 317	0	14.2 <sub>z</sub>	15.35	3.025	17.50	17.17 17.50	28.28 57.20	90.00 90.00	90.00 90.00	120.00 120.00	H.	SiO <sub>2</sub> Li <sub>2</sub> O-Na <sub>2</sub> O-Al <sub>2</sub> O <sub>3</sub> -SiO <sub>2</sub> -H <sub>2</sub> O
ZSM-3	48- 73D	i	3.36 <sub>x</sub>	3.32 <sub>8</sub>	3.048	29.00	29.00	18.77	90.00	90.00	120.00		Nn188Al2Si2.77O9.48
Epistilbite	20 1201						$E_{j}$	pistilbi	te—EP	Ţ		•	
Брацоке	39-1381	*	8.90,	3.45 <sub>9</sub>	3.218	9.09	17.75	10.23	90.00	124.65	90.00	M (	Ca <sub>2</sub> (Si <sub>2</sub> Al <sub>3</sub> )O <sub>24</sub> •8H <sub>2</sub> O
AIPO4-17	41- 574	c ·					_	<i><b>Grionite</b></i>	ERI				
AlPO4-17 AlPO4-17	43- 567	0	11.5 <sub>x</sub> 11.6 <sub>x</sub>	6.62 <sub>5</sub> 4.33 <sub>9</sub>	9.05 <sub>6</sub> 2.81 <sub>7</sub>	13.24	13.24	14.77	90.00	90.00		H A	AlieProOrs(C6H11N), 4H2O
Brionite	39-1379	<b>o</b>	6.58 <sub>x</sub> 2.85 <sub>x</sub>	11.5 <sub>8</sub> 3.77 <sub>9</sub>	9.10 <sub>5</sub> 4.35 <sub>6</sub>	13.30	13.30	15.08	90.00	90.00		X 4	Al <sub>2</sub> O <sub>3</sub> • 0.99P <sub>2</sub> O <sub>5</sub> • 0.87H <sub>2</sub> O • 0.46C <sub>7</sub> H <sub>13</sub> N AlPO <sub>4</sub>
SAPO-17 SAPO-17	47- 620 47- 621	0	11.5 <sub>z</sub>	6.61 <sub>z</sub>	4.33					55.00		H H	INaCa(Si <sub>14</sub> A1 <sub>4</sub> )O <sub>30</sub> =15H <sub>2</sub> O N <sub>0.56</sub> Si <sub>0.02</sub> P <sub>0.42</sub> O <sub>2</sub> =0.103C <sub>6</sub> H <sub>13</sub> N
Unnamed zeolite Unnamed zeolite	41-1461	*	6.56 <sub>x</sub> 11.4 <sub>x</sub>	11.5 <sub>9</sub> 6.60 <sub>6</sub>	9.17 <sub>3</sub> 4.32 <sub>6</sub>	13.30 13.19	13.30 13.19	15.10 15.04				H A	No seSio ozPo 42Oz
Unnamed acolite	42- 370	i	6.55 <sub>x</sub> 11.5 <sub>x</sub>	11.2 <sub>8</sub> 6.60 <sub>8</sub>	3.57 <sub>6</sub> 3.74 <sub>6</sub>	13.07 13.13	13.07 13.13	15.06 15.03	90.00	90.00	120.00	4) F	14.2K1.5(Na,Ca,Mg)0.5Fe0.3Ala.0Si27.7O72*xH2O C028Na0.192Al2Si10.43O25.85*xH2O
Unnamed zeolite Unnamed zeolite	42- 371 42- 372	i	11.4,	2.867	4.887	13.23	13.23	15.12	90.00			п г	C0.56Na0.054Al <sub>2</sub> Si <sub>3</sub> 11.18O <sub>25.51</sub> × xH <sub>2</sub> O C0.22Na0.25Al <sub>2</sub> Si <sub>8.67</sub> O <sub>22.52</sub> × xH <sub>2</sub> O
Unnamed scolite Unnamed zeolite	42- 373		6.51 <sub>x</sub> 11.4 <sub>x</sub>	11.3 <sub>9</sub> 6.57 <sub>6</sub>	8.57 <sub>6</sub> 2.85 <sub>5</sub>	13.09 13.20	13.09 13.20	15.09 15.02				H K	(0.20Nii0.24Al2Si 10.96Ov2.70.0xH2O
Unnamed zcolite		į	11.4.	3.81 <sub>5</sub> 3.76 <sub>6</sub>	6.59 <sub>4</sub> 3.60 <sub>6</sub>	13.22 13.23	13.22 13.23	15.07 15.20	90.00	90.00	120.00	n n	0.54Na0.066Al <sub>2</sub> Si <sub>7.79</sub> O <sub>18.78</sub> *xH <sub>2</sub> O 0.14Na0.125Al <sub>2</sub> Si <sub>0.31</sub> O <sub>19.75</sub> *xH <sub>2</sub> O
Unnamed zeolite ZSM-34			9.32 <sub>x</sub> 11.5 <sub>x</sub>	6.88a 8.76a	6.922	-	-		-4.00	JU.UU		и к Х (1	&Na26Ga13.09Sia.19O25.50 • 250H2O • C10H2aO3N2 K,Na)Al2Si79O150.6
25M-34 25M-34	42- 374	o	6.59 <sub>x</sub>	8.76 <sub>9</sub> 11.4 <sub>8</sub>	3.59 <sub>9</sub> 3.58 <sub>8</sub>	13.11	13.11	15.05	90.00	90.00			la2O-K2O-Al2O3-SiO2 [-Na-Al2-Si-O-H2O
- <del>-</del>	10-010	~	11.6 <sub>x</sub>	3.769	3.59 <sub>5</sub>								6.4H17.9N1.3O1.28*K0.94N20.25Al2Si10.8O25.2

Zeolite Structure Type Name—Code

/			,	Zeolite	Stru	ture T	ype No	ame-	-Code	2		
éolite Name	PDF# QN		Strongest effections	Cell a	Paran b	neters C	Cel a.	l Angle β		rys.	Chemicals & Formulairs ( NO E358	
Solite Haine	1017 4.			<del></del> -		EU-1-			`	-,	Formulains Ado, ESCA	TICKLE POOR
pamed zeolita.	45-'406 O	4.30 <sub>x</sub>	. 8.996 8.2	284 ,			300			x	283SiO <sub>2</sub> •Al <sub>2</sub> O <sub>3</sub>	A STATE OF THE STA
		•		٠.	Fo	ıujasite	e—FAU	,			THE RESERVE TO A CONTROL OF THE PARTY OF THE	Total and
\$2.1	47- 722 O 47- 723 O	3.40 <sub>x</sub>		00 <sub>7</sub> 17.43 70 <sub>6</sub> 17.42	17.43 17.42	28.36 28.41	90.00 90.00	90.00	120.00 120.00	H	Cao 64Na) 04Al <sub>2</sub> Si4.25O <sub>12.42</sub>	Hear Contained
SZ-1 BAPO	52- 161 * 47- 249 i	14.3; 13.6;	5.673 4.1	76 <sub>2</sub> · 24.73 70 <sub>4</sub> 23.38	24.73 23.38	24.73 23.38	90.00 90.00	90.00	90.00 90.00		(C <sub>4</sub> H <sub>12</sub> N,C <sub>12</sub> H <sub>22</sub> N)-(G <sub>9</sub> ,Al)-PO <sub>4</sub> -H <sub>2</sub> O Ne <sub>26</sub> Be <sub>26</sub> P <sub>26</sub> O <sub>122</sub> •192H <sub>2</sub> O	
PZ-1A PZ-1B.	47- 250 *	14.6,	3.374 8.9	934 25.23	25.23	25.23	90.00	90.00	90.00	C	[Na,(CH <sub>2</sub> )4Ni <sub>96</sub> Zn <sub>96</sub> P <sub>96</sub> O <sub>192</sub> • 192H <sub>2</sub> O	Oranger (Construction Cons
CR-30 enjesite	47- 655 i 12- 228 i	15.0 <sub>x</sub> 14.3 <sub>x</sub>	5.71 <sub>x</sub> 8.7	65 <sub>3</sub> 17.80 75 <sub>8</sub> 24.83	17.30 24.83	28.78 24.83	90.00 90.00	90.00	90.00 90.00	E C C	C <sub>7.84</sub> H <sub>20.16</sub> N <sub>1.12</sub> N <sub>80.88</sub> Al <sub>2</sub> Si <sub>16.02</sub> O <sub>25.04</sub> N <sub>82</sub> Al <sub>2</sub> Si <sub>8.8</sub> O <sub>10.6</sub> * 7H <sub>2</sub> O N <sub>82</sub> Al <sub>2</sub> Si <sub>2.4</sub> O <sub>8.6</sub> * 6.7H <sub>2</sub> O	
aulence	12- 246 i 28-1034 O	14.5 <sub>x</sub> 15.0 <sub>x</sub>	2.96 <sub>x</sub> 3.9	88 <sub>8</sub> 24.96 93 <sub>6</sub> 26.59	24.96 25.59	24.96 25.59	90.00	90.00	90.00 90.00 00.00	CCC	No. Al-Con. Anti-O	A STATE OF THE STA
gujanite nujanite h-Ba exchanged	39-1380 i 47- 1	14.3 <sub>x</sub> 3.76 <sub>x</sub>	-	67 <sub>8</sub> 24.68 79 <sub>8</sub> 24.92	24.68 24.92	24.68 24.92	90.00 90.00	90.00	90.00	C	0.95BaO+0.05Na <sub>2</sub> O+Al <sub>2</sub> O <sub>3</sub> +3.3SiO <sub>2</sub> +6H <sub>2</sub> O	es ages f
aX-Zeolite	47-786 i 28-1036	14.8 <sub>x</sub> 3.26 <sub>x</sub>	3.80 <sub>6</sub> 6.1	71s 24.92 68s	24.92	24.92	90.00	90.00	90.00	C X	Cu <sub>17</sub> Na <sub>25</sub> (NH <sub>4</sub> ) <sub>27</sub> Al <sub>86</sub> Si <sub>105</sub> O <sub>384</sub> (H <sub>2</sub> O) <sub>172</sub> (NH <sub>3</sub> ) <sub>64</sub> Na <sub>14</sub> Al <sub>12</sub> Si <sub>13</sub> O <sub>51</sub> •6H <sub>2</sub> O	•
APO-87 APO-87	47- 624 O 47- 626 O	14.3,	5.684 3.	79 <sub>4</sub> 59 <sub>2</sub>						X X	$\begin{array}{l} Al_{0.51}Si_{0.125}P_{0.365}O_{2}\bullet0.065C_{12}H_{26}N\bullet0.035C_{4}H_{12}N\bullet0.\\ Al_{0.51}Si_{0.125}P_{0.365}O_{2} \end{array}$	22H <sub>2</sub> O
erchanged	47- 2 42- 18 C	14.4 <sub>x</sub> 14.0 <sub>x</sub>		697 24.99 651 24.17	24.99 24.17	24,99 24.17	90.00 90.00	90.00 90.00	90.00	C	0.93SrO-0.07Na <sub>2</sub> O-Al <sub>2</sub> O <sub>3</sub> -2.5SiO <sub>2</sub> -6H <sub>2</sub> O H <sub>18.9</sub> Al <sub>18.9</sub> Si <sub>173.1</sub> O <sub>384</sub>	
B.Y innamed zeolite ilnamed zeolite	13- 549 28-1883 *	8.80 <sub>x</sub> 14.3 <sub>x</sub>	3.79 <sub>x</sub> 3.	32 <sub>2</sub> 24.85 68 <sub>1</sub> 24.75	24.85 24.75	24.85 24.75	90.00	90.00 90.00	90.00	C	C4H18Al2NO6Si*xH2O C4E4H1872Al54.7K31.3N23.4O384Si137.3*111H2O	
finamed zeolite	26-1884 *	14.3 <sub>x</sub>	3.77 <sub>2</sub> 6.	681 24.74	24.74	24.74	90.00	90.00	90.00	C	C <sub>27.6</sub> H <sub>185</sub> Al <sub>54.7</sub> K <sub>27.2</sub> N <sub>27.5</sub> O <sub>284</sub> Si <sub>127.3</sub> =124H <sub>2</sub> O C <sub>56.4</sub> H <sub>185</sub> Al <sub>54.7</sub> K <sub>35.9</sub> N <sub>18.8</sub> O <sub>284</sub> Si <sub>127.3</sub> =101H <sub>2</sub> O	
finamed zeolite innamed zeolite	26-1885 * 47- 3 i	14.4	3.808 2.	31 <sub>1</sub> 24.75 88 <sub>7</sub> 24.89	24.75 24.89	24.75 24.89	90.00	90.00 90.00	90.00	Č	0.8CaO = 0.2Na <sub>2</sub> O = Al <sub>2</sub> O <sub>3</sub> = 3.0SiO <sub>2</sub> = 6H <sub>2</sub> O C <sub>2.54</sub> H <sub>7.65</sub> Al <sub>2</sub> N <sub>0.64</sub> Na <sub>1.44</sub> O <sub>20.24</sub> Sia <sub>1</sub>	•
SM-20 SM-20	43- 46 O 47- 553 O	14.7	13.98 5.	68 <sub>6</sub> 62 <sub>4</sub> 17.30 85 <sub>9</sub> 17.30	17.30 17.30	28.60 28.60	90.00 90.00		120.00 120.00	H	C <sub>20</sub> H <sub>10</sub> N-N <sub>82</sub> O-Al <sub>2</sub> O <sub>3</sub> -SiO <sub>2</sub> -H <sub>2</sub> O C <sub>20</sub> H <sub>10</sub> N-N <sub>82</sub> O-Al <sub>2</sub> O <sub>3</sub> -SiO <sub>2</sub> -H <sub>2</sub> O	-
SM-20 SM-20, dealuminated	47- 554 0 45- 111 i	14.1 <sub>x</sub>	14.8 <sub>x</sub> 5.	603 17.17	17.17	28.28	90.00	90.00	120.00	H	SiO <sub>2</sub>	
75M-20, dealuminated 25M-3 25M-3 Zolito (Na,Zn,P)	38- 317 C 48- 730 i	3.36	3,32, 3.	.02s 17.50 .04s 29.00	17.50 29.00	67.20 18.77	90,00	90.00	120.00	H	Li <sub>2</sub> O-Ne <sub>2</sub> O-Al <sub>2</sub> O <sub>3</sub> -SiO <sub>2</sub> -H <sub>2</sub> O Ne <sub>1,88</sub> Al <sub>2</sub> Si <sub>2,77</sub> O <sub>9,48</sub>	
Zolite (Na,Zn,P) Zolite X, (Ag)	45- 128 C 38- 233 *	14.6 <sub>2</sub> 14.4 <sub>2</sub>	8.92 <sub>a</sub> 7. 2.79 <sub>3</sub> 6.	61 <sub>9</sub> 25.23 .23 <sub>2</sub> 24.96	25.23 24.96	25.23 24.96	90.00 90.00	90.00 00.08	90.00 90.00	C	Na <sub>4</sub> g(ZnPO <sub>4</sub> ) <sub>96</sub> •125H <sub>2</sub> O (Ag,Na) <sub>2</sub> •Al <sub>2</sub> Si <sub>2,5</sub> O <sub>9</sub> •xH <sub>2</sub> O	
Zolite X, (Ag) Zolite X, (Bs) Zolite X, (Ca)	38- 234 1 38- 232 i	14.4 <u>.</u> 14.4 <u>.</u>		.778 24.99 .712 24.90	24.99 24.90	24.99 24.90	90.00 90.00	90.00 90.00	90.00 90.00	C	(Ba,Na)+Al <sub>2</sub> Si <sub>3.5</sub> O <sub>8</sub> +6.2H <sub>2</sub> O (Ca,Na)+Al <sub>2</sub> Si <sub>2.5</sub> O <sub>9</sub> +6.4H <sub>2</sub> O	
Zenita X. (Ce)	38- 235 i 43- 149 C	14.4,	3.81 <sub>4</sub> 6. 7.24 <sub>4</sub> 6.	.72 <sub>2</sub> 24.99 .27 <sub>7</sub> 25.07	24.99 25.07	24.99 25.07	90.00 90.00	90.00 90.00	90.00 90.00	c	(CeO)g(Al <sub>2</sub> Si <sub>2,5</sub> O <sub>2</sub> )g*xH <sub>2</sub> O Na <sub>7</sub> Gd <sub>2</sub> γ(Al <sub>28,11</sub> Si <sub>103,9</sub> O <sub>384</sub> )*19H <sub>2</sub> O	
Zenita X, (K)	26- 898 <b>*</b> 38- 236 i		2.902 2	.81 <sub>2</sub> 25.12 .32 <sub>2</sub> 24.88	25.12 24.88	25.12 24.88	90.00 90.00	90.00 90.00	90.00	C	K86.6Alos.6Si106.6O384 *258H2O (Li,Na)2*Al2Si2.6O4*7.2H2O	
Zeolite X, (L2) Zeolite X, (NH4)	39- 139 i 38- 237 *	14.4	3.812 3.	.84 <sub>2</sub> 25.01 .89 <sub>2</sub> 24.99	25.01 24.99	25.01 24.99	90.00	90.00	90.00 90.00	C	(NH <sub>4</sub> ,Na) <sub>2</sub> •Al <sub>2</sub> Si <sub>2,5</sub> O <sub>9</sub> •xH <sub>2</sub> O Na <sub>2</sub> Al <sub>2</sub> Si <sub>2,5</sub> O <sub>9</sub> •6.2H <sub>2</sub> O	-
Ziblite X, (Na) Ziblite X, (Na)	39- 218 C	14.5,	8.851 2	.89 <sub>1</sub> 25.03 .34 <sub>8</sub> 24.96	25.03 24.96	25.08 24.96	90.00	90.00 90.00	90.00	C	NagaAlgsSi <sub>104</sub> O <sub>384</sub> • 220H <sub>2</sub> O C <sub>6</sub> H <sub>4</sub> O <sub>2</sub> • Na <sub>2</sub> O • Al <sub>2</sub> O <sub>3</sub> • 3.5SiO <sub>2</sub> • 7H <sub>2</sub> O	•
Zeolite X, (Na) Zeolite X, (X)	26-895 1	14.5,	3.821 8	.87, 25.08	25.08 24.76	25.08	90.00 90.00	90.00	90.00 90.00	C	K <sub>85.5</sub> Al <sub>86.5</sub> Si <sub>106.6</sub> O <sub>384</sub> Na <sub>1.84</sub> Al <sub>2</sub> Si <sub>4</sub> O <sub>11.92</sub> °7H <sub>2</sub> O	
Zeolite Y Zeolite Y	38- 238 ± 38- 239 ±	14.3,	5.678 3	.86 <sub>5</sub> 24.76 .77 <sub>8</sub> 24.78 .86 <sub>6</sub> 24.77	24.73 24.77	24.76 24.73 24.77	90.00 90.00	90.00 90.00	90.00	C	Na <sub>1.88</sub> Al <sub>2</sub> Si <sub>4.8</sub> O <sub>13.64</sub> *9H <sub>2</sub> O Na <sub>2.06</sub> Al <sub>2</sub> Si <sub>3.8</sub> O <sub>11.63</sub> *8H <sub>2</sub> O	
Zőlite Y Zőlite Y Zőlite Y Zőlite Y	38- 240 i 40- 336 i	14.8	3.789 5	.697 24.78	24.78	24.78	90.00	90.00	90.00	C	Na2_1Mg21_7(NH4)13.5Al69Si183O384 • 240H2O	
Zedita Y (K,Ga) Zedlita Y, (K)	46- 568 C 26- 893 ±	14.4	5.73 <sub>1</sub> 8	.064 24.78 .831 24.97	24.78 24.97	24.78 24.97	90.00	90.00	90.00	C	K65.6Gn55.6Si136.2O364*241H2O K69.6Al69.6Si122.2O384	
Zeolite Y, (R) Zeolite Y, (K)	26- 894 i 26- 896 i	14.3	3.77 5	.78 <sub>2</sub> 24.78 .65 <sub>2</sub> 24.69	24.78 24.69	24.78 24.69	90.00	90.00	90.00 90.00 90.00	CCC	K42,2A142,2B1443,6O394 K42,2A142,2B1443,6O394*243H2O K43,2A143,2B142,2O394*247H2O	
Zolite Y, (K) Zolite Y, (K) Zolite Y, (K,NH4)	28- 897 1 26- 899			.88 <sub>1</sub> 24.92 5.68 <sub>1</sub> 24.74	24.92 24.74	24.92 24.74	90.00	90.00 90.00	90.00	c	Kee afNHaba a Ales a Sirer aOags a 101 HaO	1
Zeolite Y, (Na.) Zeolite Y, (Na.Be.P)		14.2 13.5	3.76 <sub>6</sub> 5	.66 <sub>5</sub> 24.68	24.68 23.38	24.68 23.38	90.00 90.00	90.00 90.00	90.00 90.00	Ċ	Na2Al2Si4,5013*xH2O Na96(BaPO4)96	
Zeolite Y, (K., NH4) Zeolite Y, (Na) Zeolite Y, (Na,Be,P) Zeolite Y, (Na,Mg,Be,P) Zeolite Y, dealuminated	45- 127 ( 45- 112 ·	18.4 14.0	8.22 <sub>c</sub> 7	7.01a 23.24 5.58 <sub>g</sub> 24.23	23.24 24.23	23.24 24.23	90.00 90.00	90.00 90.00	90.00 90.00		NaceMgm(BePO4)06 SiO2	
					F	'errieri	te-FE	R				• • •
Ferrierite	39-1382 1 46- 30	9.60 3.78		1.71 <sub>2</sub> 19.20 3.48 <sub>2</sub> 19.01	14.14 14.16	7.50 7.48	90.00 90.00	90.00	90.00 90.00		N8Mg(Si15Al3)O26=9H2O N83,6Ga4,9Si31,3O72=xH2O	1.42
Petrierite, (Ge) ZSM-35 ZSM-35	44- 104 (	9.52	2 3.53	3.46 <sub>6</sub> 3.13 <sub>4</sub>			*****			X	Na <sub>0.22</sub> Al <sub>2</sub> Si <sub>29.9</sub> O <sub>54,65</sub> • 9.9H <sub>2</sub> O Pr(MnO <sub>4</sub> )2 • 4R <sub>2</sub> O	
28M-35	51- 242	8.53	, 9.50 <sub>8</sub> 3	3.487						X	Na <sub>0,45</sub> AİSi <sub>11</sub> O <sub>47,2</sub> =0.55C <sub>15</sub> H <sub>42</sub> NOH=xH <sub>2</sub> O	Serve Delic Follows
ZSM-38 XSM-38	44- 105	0 8.57 0 8.56	, 3.50 <sub>x</sub> 4	1.01s 1.01s						X	0.48Na <sub>2</sub> O•Al <sub>2</sub> O <sub>3</sub> •0.53N <sub>2</sub> O•11.85SiO <sub>2</sub> •5.28H <sub>2</sub> O•C <sub>6</sub> C <sub>27.93</sub> H <sub>51.74</sub> Br <sub>1.47</sub> N <sub>1.47</sub> •Na <sub>2.39</sub> Al <sub>3.85</sub> Si <sub>32.16</sub> O <sub>72</sub>	H <sub>M</sub> NO was skiller Startish
Johnso Johnso AVN 0-23 Johnso D, (Sr) Johnso Ga/Nu-23	18-1266	0 8.68 0 8.48 0 8.54	3.549	3.967 3.49 <sub>8</sub> 19.01 4.06 <sub>8</sub>	14.13	7.48	90.00	90.00	90.00		S74AlsSi20O72(OH)2*18H2O C27.33H21.7(Br1.47N1.47*N2.39Ga3.85Si22.15O72	AACO .
Agnite Ga/Nu-23	49- 923	0 8.54	x 3.00g ·	1.008	F	ranzin	itaFI	24	٠	-		. Dans
(Pinzinite	30-1170	i 3.72	, 3.59 <sub>6</sub> 3	3.614 12.88	_		90.00		120.00	B	(Na,Ca);(Si,Al) <sub>12</sub> O <sub>24</sub> (SO <sub>4</sub> ,OH,CO <sub>3</sub> ); •H <sub>2</sub> O	
e e					G	ismond	ineG	IS				Salara .
Amerite		i 2,72	4,220	3.14 <sub>8</sub> 10.23 2.71 <sub>8</sub> 9.32			90.00	88.32 90.80			K <sub>2</sub> Na <sub>2</sub> Al <sub>4</sub> Si <sub>4</sub> O <sub>16</sub> *5H <sub>2</sub> O Na <sub>2</sub> Ba <sub>2</sub> P <sub>5</sub> O <sub>32</sub> *10H <sub>2</sub> O	
Buyllophosphate-G CAPO-43	52-1510	i 6.27 i 7.01 i 3.14	x 8.217	2.71 <sub>6</sub> 9.32 3.50 <sub>5</sub> 10.21 7.15 <sub>8</sub> 9.89	10.21	9.64	90.00 90.00	90.00	90.00	T	Alo.16Coo.84PO4*0.5C2H10N2*0.5H2O NaCa2.6(Si10Al6)O22*14H2O	the tenter of
APO 43 dirronite Limondine dimondine	51-1499	7.20	4.18 <sub>2</sub>	3.16 <sub>x</sub> 9.96	9.98	10.39	90.00	90.00	90.00	T	Ca <sub>3</sub> Al <sub>6</sub> Si <sub>9</sub> O <sub>20</sub> •15H <sub>2</sub> O	4
Summondine	39-1373	i 3.34 ★ 4.27	3.19 <sub>9</sub>	3.19 <sub>2</sub> 10.02 2.69 <sub>8</sub> 10.02	10.64	9.84	90.00 90.00 90.00		90.00	M	0-41 01-0-49-0	
(denyarated)	85- 559	C 4.81	4.12 <sub>2</sub>	3.13 <sub>6</sub> 13.90 3.20 <sub>x</sub> 10.45			90.00				0.05NmnO+AlvO+3.35SiOz+4.79H2O	
Ande B2	38- 328	O 3.18 O 3.21	. 7.14a	4.10 <sub>8</sub> 4.11 <sub>8</sub>						x	0.00Npa0.04.07SiO2.5.7H2O1	
Augumante Lindo B1 Schilde B2 Lindo B3 Lindo B7 MAPO-4B	38- 329 38- 330	O 7.01	3, 3.20 <sub>9</sub>	4.11 <sub>7</sub> 7.08 <sub>7</sub>						X	1.05Na <sub>2</sub> O • Al <sub>2</sub> O <sub>3</sub> • 3.8SiO <sub>2</sub> • 4.7H <sub>2</sub> O 1.04Na <sub>2</sub> O • Al <sub>2</sub> O <sub>3</sub> • 3.74SiO <sub>2</sub> • 3.5H <sub>2</sub> O <sub>3</sub> Mg <sub>2</sub> AlaP <sub>2</sub> O <sub>2</sub> x(C <sub>2</sub> H <sub>2</sub> N) <sub>2</sub>	
E229caes Pl. (Na)		C 7.15	4.18s	5.114 10.22 4.08 <sub>8</sub> 9.99			90.00				NajAlaSisOis*8H2O	
Pecies P2, (Na) Unhamed reolite Unhamed zeolite Zeolite N-L	25- 779 16- 355	4.10 3.13	) <sub>x</sub> 3.19 <sub>k</sub>	7.15 <sub>8</sub> 10.09 4.04 <sub>7</sub> 9.88			90.00	90.00	90.00	C	NasAlsSigO1s*6H2O K2.84Ca1.c3Ala7Si10.3O2*10.6H2O Mg2.85Ala7Si10.3O2*14H2O	
Unamed zeolite	16- 604 14- 18	i 3.10	5 <sub>2</sub> 7.09 <sub>8</sub>	4.08 <sub>6</sub> 10.00 3.17 <sub>2</sub> 10.02	10.00	10.00	90,00	90.00	90.00	0	MgrasAla, SinsJOrr 14HrO C3HisAbN2OroSi xHrO NasaAlaeSiraAOrr 14HrO	
(Na)	40-1464	<b>★</b> 3.1	5 <sub>1</sub> 2.68 <sub>5</sub>	7.090 10.00	10.00	10.07	90.00	90.00	90.00	T	Megasala issued services of the College of the Coll	
Zeolito P. (Na) Zeolito P.B Zeolito P.L (Na) Zeolito Pt. (Na)	44- 52 38- 325	C 7.10	7.08	5.01e 10.10	10.10	9.80	90.00 90.00	90.00	90,00	T	0.58Na <sub>2</sub> O • Al <sub>2</sub> O <sub>3</sub> • 0.599SiO <sub>2</sub> • 0.52PsO • \$.12HsO 4 Na <sub>6</sub> Al <sub>2</sub> Si <sub>10</sub> O <sub>32</sub> • 12H <sub>2</sub> O	
E Colite Pt	39- 219 34- 524	C 3.1		4.10g 10.04 7.18g 10.11			90.00					STEPPE CA
THE SECTION OF THE SE												MOSPO Chicago

Zeolite Structure Type Name—Code Cell Parameters Cell Angles Crys. Chemical 3 Strongest PDF# QM Reflections Zeolite Name Sys. Formula Gmelinite--GMR90.00 120.00 H 90.00 120.00 H 90.00 120.00 H 90.00 120.00 H 90.00 120.00 H Na2.04C70.62Fe0.54A10.04SisO16.33\*H2O Na2.03C70.50A13.0Sis.19O14.42 Na2.41,Si4O12\*6H3O A13.1N/Na2.65Sis.7014.61\*xH2O SrA12Si4O12\*6H2O 50-1692 50-1693 38- 435 31-1321 5.02<sub>x</sub> 11.9<sub>x</sub> 4.11<sub>x</sub> 4.11<sub>x</sub> 4.99<sub>x</sub> 6.88<sub>7</sub> 5.01<sub>7</sub> 11.9<sub>6</sub> 4.50<sub>6</sub> 4.12<sub>x</sub> 11.9<sub>7</sub> 6.86<sub>7</sub> 2.98<sub>6</sub> 3.23<sub>5</sub> 2.99<sub>x</sub> ECR-26 ECR-26 13.74 10.04 90.00 00.00 120.00 13.74 13.75 13.73 13.80 90.00 90:00 90.00 90.00 13.74 10.03 13.75 10.06 13.73 10.07 13.80 -10.01 Gmelinite Unnamed reolite Zcolite F, (Sr) 17- 141 Goosecreekite--G00 5.595 7.52 17.56 7.35 . 90.00 105.71 90.00 M CaAl-SicOta+5H-O Conserreekite 35- 469 4.53. 7.196 Heulandite—HEU  $\begin{array}{l} KNa_2Co_2(Si_{29}Al_7)O_{72} \circ 24H_2O \\ (Na, K, Ca)_5Al_6Si_{30}O_{72} \circ 18H_2O \\ Ca_6\_K_0\_4(Al_7Si_{29})O_{72} \circ 13H_2O \\ Ca(Si_7Al_2)O_{12} \circ 6H_2O \\ (Ca, Sr)Al_2Si_7O_{12} \circ 6H_2O \end{array}$ 17.67 17.65 3.96<sub>6</sub> 7.91<sub>4</sub> 3.92<sub>7</sub> 3.98<sub>6</sub> 2.97<sub>3</sub> 3.99<sub>7</sub> 3.98<sub>7</sub> 7.95<sub>7</sub> 7.41 7.40 7.43 M M M M Clicoptilolite 39-1383 8.95 17.91 90.00 116.37 90.00 47-1870 44-1398 41-1357 8.95<sub>x</sub> 3.97<sub>x</sub> 8.96<sub>x</sub> 8.94<sub>x</sub> Clinoptilolite, (Na) Clinoptilolite-(Cs) 18.01 90.00 116.30 90.00 17.73 17.74 17.72 90.00 116.18 90.00 7.43 7.46 90.00 116.45 90.00 116.37 90.00 90.00 Heulandite 2.97<sub>9</sub> 2.80<sub>8</sub> Heulandite-Sr 24- 469 SrAl<sub>2</sub>Si<sub>7</sub>O<sub>18</sub>•6H<sub>2</sub>O 5.12a 2.97 7.46 18.00 15.90 90.00 М Zeclite R. (Sr) 17- 143 3.98. 91.50 90.00 ITQ-4-IFRM M M 10.9<sub>x</sub> 10.9<sub>x</sub> 4.35<sub>x</sub> 7.63 7.63 7.60 90.00 90.00 90.00 Calcined ITQ-4 49- 619 13.50 13.49 90.00 101.98 90.00 101.97 90.00 90.00 18.67 ITQ-4 MCM-58 18.70 101.90 C15.8H24Al2K1.9N1.2Na1.2O53Si24\*XH2O ITQ-7--ISV SiO<sub>2</sub> 11.56 12.84 12.84 25.20 90.00 90.00 90.00 T ITQ-7 51-1379 12.6<sub>x</sub> 9.079 ITQ-3--ITE 49- 623 51-1381 9.72 9.73 19.62 19.62 90.00 90.00 90.00 90.00 O 90.00 O Si<sub>04</sub>O<sub>128</sub> SiO<sub>2</sub> Calcined ITQ-3 Na-J (Barrer & White)—JBW Na<sub>2</sub>Al<sub>2</sub>Si<sub>2</sub>O<sub>8</sub> • 0.5H<sub>2</sub>O Na<sub>2</sub>Al<sub>2</sub>Si<sub>2</sub>O<sub>8</sub> • H<sub>2</sub>O 4.07g 4.39g Nepheline hydrate 5.22 90.00 90.00 90.00 Necheline hydrate ZK-5 KFI BaO-Al<sub>2</sub>O<sub>3</sub>-SiO<sub>2</sub>-BaBr<sub>2</sub>\*H<sub>2</sub>O NaAlSi<sub>3</sub>O<sub>2</sub>\*xH<sub>2</sub>O Na<sub>2</sub>g<sub>2</sub>Al<sub>2</sub>r<sub>3</sub>Sir<sub>3</sub>O<sub>2</sub>O<sub>2</sub>d<sub>2</sub>s\*12.2H<sub>2</sub>O C<sub>2</sub>s<sub>3</sub>-K<sub>1</sub>(2Al<sup>2</sup>g<sub>2</sub>Sir<sub>3</sub>C<sub>2</sub>O<sub>2</sub> H<sub>15</sub>-32(NH<sub>4</sub>M<sub>1</sub>,r<sub>1</sub>Ce<sub>2</sub>,r<sub>4</sub>Alg<sub>2</sub>,qSir<sub>1</sub>s<sub>2</sub>O<sub>192</sub>\*xH<sub>2</sub>O 13.28 18.67 13.28 18.67 90.00 90.00 CCXCC 0 13.28 18.67 90.00 90,00 Unnamed zeolite 10- 7 18-1198 3.20<sub>x</sub> 5.41<sub>5</sub> 9.41<sub>x</sub> 13.4<sub>x</sub> 4.41s 7.50<sub>2</sub> 13.2<sub>6</sub> 4.40<sub>7</sub> 90.00 Unna ZK-5 ZK-5 ZK-5 37- 360 39- 220 40- 338 O C \* 90.00 90.00 90.00 18.67 18.67 18.67 90.00 90.00 H1346/NH4/4 30/31 mAh2 mSira 11 O122 \*\* H2O
CpH2 5A|2NNaO14Sis \*\* H2O
Lda 22Na1 74A|5Sis 19O10.22 \*\* 5.38H2O
Ba1\_8A|5Sis\_4O126Clie\_2\*\* 2.3H2O
Ba1\_8A|5Sis\_6O2,2Cli\_3\*\* 0.9H2O 18.68 18.68 18.88 18.59 4.41<sub>6</sub> 5.41<sub>5</sub> 5.44<sub>7</sub> 18.68 18.68 18.88 18.59 90.00 90.00 90.00 90.00 ZK-5 40- 339 9.37<sub>x</sub> 3.217 00000 ZK-5 44- 101 9.41<sub>x</sub> 9.40<sub>x</sub> 4.415 18.68 18.88 90.00 90.00 ZK-5. (Na.Li) 41. 4.209 Zeolite P Zeolite P 24-1432 13.1<sub>x</sub> 3.07<sub>x</sub> 3.01<sub>x</sub> 5.07<sub>8</sub> 3.19<sub>9</sub> 4.46<sub>6</sub> 18.59 90.00 90.00 90.00 24-1433 18.93 18.93 18.93 90.00 90.00 90.00 18.63 18.94 18.63 18.94 18.63 18.94 90.00 90.00 90.00 90.00 90.00 90.00 c Ba<sub>1.9</sub>Al<sub>2</sub>Si<sub>4.3</sub>O<sub>12.7</sub>Br<sub>1.6</sub>•2H<sub>2</sub>O Ba<sub>1.8</sub>Al<sub>2</sub>Si<sub>2.6</sub>O<sub>0.1</sub>Br<sub>1.3</sub>•1.6H<sub>2</sub>O Zcolite Q Zeolite Q Laumontite-LAU 26-1047 45-1325 14.76 14.82 13.08 13.10 90.00 112.02 90.00 112.00 90.00 M 90.00 M CaAl<sub>2</sub>Si<sub>4</sub>O<sub>12</sub> • 4H<sub>2</sub>O Ca(Al<sub>2</sub>Si<sub>4</sub>O<sub>12</sub>) • 4H<sub>2</sub>O Laumontite Laumontite Levyne LEV Al<sub>2</sub>Si<sub>20</sub>O<sub>103</sub>
Cu<sub>3</sub>Al<sub>6</sub>Si<sub>11,0</sub>O<sub>20</sub>\*18H<sub>2</sub>O
Cu<sub>2</sub>Al<sub>6</sub>Si<sub>11,0</sub>O<sub>20</sub>\*18H<sub>2</sub>O
Cu<sub>2,6</sub>(Na,K)O<sub>3</sub>Al<sub>6</sub>Si<sub>11,5</sub>O<sub>30</sub>\*15H<sub>2</sub>O
Cu<sub>3,6</sub>H<sub>3</sub>Nl<sub>6</sub>Al<sub>6</sub>Si<sub>40,6</sub>Fo<sub>8</sub>O<sub>100</sub>\*xH<sub>2</sub>O
Al<sub>5,6</sub>Si<sub>48,6</sub>Fo<sub>8</sub>O<sub>100</sub> 8.00<sub>x</sub> 4.08<sub>x</sub> 4.08<sub>x</sub> 4.04<sub>x</sub> 7.98<sub>x</sub> 4.00<sub>8</sub> 6.69<sub>3</sub> 10.3<sub>7</sub> 13.06 18.36 13.34 13.06 13.36 13.34 22.56 22.88 23.01 90.00 90.00 90.00 90.00 90.00 90.00 120.00 120.00 120.00 120.00 46- 750 26-1381 6.53<sub>9</sub> 2.81<sub>6</sub> R R R R Hydrogen Nu-3 Levyne Levyne Levyne Levyne 8.15<sub>0</sub> 5.08<sub>x</sub> 4.02<sub>7</sub> 46-1263 2.774 13.20 13.15 13.20 22.37 90.00 90.00 120.00 90.00 120.00 6.56 13.15 22.52 CoBildonGoldSiss NagleAl2SistObyl="(CaH16N)x H3NagleAl2SistObyl="(CaH16N)x H3NagleAl2SistObyl="(CaH16N)x" 15H2O (Li,Nahd,SAl2SistObyl="3"(CaH16N)\* 15H2O 4.04, 4.00, 8.03, 4.01, 4.01, 5.10<sub>8</sub> 5.05<sub>7</sub> 4.01<sub>9</sub> 42- 20 46- 749 47- 705 47- 706 13.23 13.04 22.29 22.59 80.00 90.00 90.00 90.00 120.00 120.00 2.776 13,23 13,04 R R Nu-3 4.19<sub>6</sub> 6.58<sub>8</sub> 4.21<sub>6</sub> Nu-3 Nn-3 \*000 5.07a 4.60s 47- 707 5.114 Allografic are Cy = 0.11C<sub>7</sub>H<sub>13</sub>N Allografic are Cy = 0.11C<sub>7</sub>H<sub>13</sub>N Allografic are Cy = 0.12C<sub>7</sub>H<sub>13</sub>N CH<sub>2</sub>](Ti<sub>0.19</sub> ... Allografic are Cy = 0.12[C<sub>7</sub>H<sub>13</sub>N CH<sub>2</sub>](Ti<sub>0.19</sub> ... Allografic are Cy 47- 622 47- 623 46- 853 46- 854 52-1506 4.04, 8.04, 4.06, 7.97, 4.04, 5.06<sub>8</sub> 6.53<sub>9</sub> 5.13<sub>8</sub> 4.00<sub>9</sub> 5.10<sub>8</sub> 4.18<sub>6</sub> 4.00<sub>6</sub> 4.27<sub>5</sub> SAPO-35 SAPO-35 13.30 23.00 90.00 120.00 13.30 90.00 TIAPSO-35 6.46<sub>5</sub> 2.78<sub>6</sub> X R 90.00 90.00 120.00 13.29 22.31 ZnAPO-35 13.29 -LIO Liottite-12.86 16.09 90.00 90.00 120.00 H (Na,Ca,K)24(Si,Al)36O72[SO4,Cl,F]10 Lightite 47-1742 \* 3.71. 3.314 4.834 12.86 Losod LOS 90.00 120.00 H 90.00 120.00 H 90.00 120.00 H Ca(Na,K)7(Si<sub>2</sub>Al<sub>6</sub>O<sub>24</sub>XS<sub>3</sub>\*)<sub>1.5</sub>\*H<sub>2</sub>O Na<sub>12</sub>Al<sub>12</sub>Si<sub>12</sub>O<sub>46</sub>\*xH<sub>2</sub>O Na<sub>12</sub>Al<sub>12</sub>Si<sub>12</sub>O<sub>46</sub>\*18H<sub>2</sub>O Li<sub>6</sub>(HPO<sub>4</sub>)(BaPO<sub>4</sub>)<sub>6</sub>\*H<sub>2</sub>O 90.00 3.72<sub>x</sub> 6.43<sub>x</sub> 6.45<sub>x</sub> 3.50<sub>x</sub> 3.31<sub>9</sub> 3.29<sub>x</sub> 3.30<sub>x</sub> 4.22<sub>8</sub> 10.70 45-1373 12.85 12.85 Bystrite Losed 3.92 3.72<sub>8</sub> 4.77<sub>8</sub> 3.62<sub>7</sub> 31-1269 12.91 12.91 Losod, (Na) Ċ 10.54 90,00 -LOV Lovdarite-25-1302 39-1367 90.00 O 90.00 O K<sub>2</sub>Na<sub>6</sub>Be<sub>4</sub>Si<sub>14</sub>O<sub>36</sub>•9H<sub>2</sub>O K<sub>2</sub>Na<sub>6</sub>Be<sub>4</sub>Si<sub>14</sub>O<sub>36</sub>•9H<sub>2</sub>O 90.00 90.00 90.00 90.00 Lovdarite C Lovdarite Linde Type A—LTA (Al<sub>12</sub>P<sub>12</sub>O<sub>48</sub>XOH)<sub>2</sub>(C<sub>18</sub>H<sub>36</sub>N<sub>2</sub>O<sub>6</sub>XH<sub>2</sub>O)<sub>8</sub> (Al<sub>12</sub>P<sub>12</sub>O<sub>48</sub>XF)<sub>2</sub>(C<sub>18</sub>H<sub>36</sub>N<sub>2</sub>O<sub>6</sub>XH<sub>2</sub>O)<sub>8</sub> Ca<sub>6</sub>(AlSiO<sub>4</sub>)<sub>12</sub>\*30H<sub>2</sub>O Na<sub>6</sub>(AlO<sub>2</sub>)<sub>2</sub>(SiO<sub>2</sub>)<sub>15</sub>\*27H<sub>2</sub>O 51- 76 51- 77 11- 589 23.81 23.87 12.26 23.81 23.87 12.26 90.00 90.00 90.00 90.00 90.00 90.00 90.00 90.00 90.00 90.00 Kryptofix 222-AlPO4 Kryptofix 222-AlPO4 Linde A Linde A, (Li) 11.9<sub>2</sub> 6.88<sub>x</sub> 12.2<sub>x</sub> 3.98<sub>8</sub> 11.9<sub>5</sub> 3.28<sub>4</sub> 3.97a 8.664 23.87 12.26 8.577 3.26s 3.24<sub>7</sub> 2.96<sub>8</sub> 12.1<sub>x</sub> 3.67, 14- 298 12.16 12.16 12.16 90.00 90.00 SAPO-42 47- 628 0 Nan.28Ala.42Sio.53Po.04O2 .0.3C4H12N .0.74H2O 13- 147 27-1406 44- 100 4.05; 12.2; 12.0; 12.3; 12.3; C<sub>2</sub>H<sub>9</sub>NO+Al<sub>2</sub>O<sub>2</sub>+xSiO<sub>2</sub>+zH<sub>2</sub>O NaAlSiPO<sub>4</sub>+xH<sub>2</sub>O Na0,eH<sub>16,8</sub>Al<sub>2</sub>Si<sub>5</sub>O<sub>14,3</sub>N<sub>1,4</sub>C<sub>1,4</sub>+xH<sub>2</sub>O Unnamed zeolite ZK-21 3.66<sub>x</sub> 3.68<sub>9</sub> 9.58<sub>7</sub> 12.1<sub>8</sub> 2.95<sub>8</sub> 3.66<sub>7</sub> 12.13 12.20 90.00 90.00 90.00 90.00 90.00 000 ZK-4 Zeolite 4A CC 5.60 90.00 90.00 8.69 24.59 12.81 90.00 Nap2Alp2Si100O384 Ag7.cNn4.4Si12Al12O48 12.31 Zeolite 4A. (Ag) 43- 143 5.51 12.31 90.00 12.2<sub>x</sub>
1.76<sub>x</sub>
4.10<sub>a</sub>
12.1<sub>a</sub>
12.3<sub>a</sub> 7.03<sub>2</sub>
1.37<sub>3</sub>
1.74<sub>9</sub>
8.59<sub>4</sub> 8.61<sub>1</sub> 2.65<sub>0</sub> 1.36<sub>8</sub> 7.01<sub>4</sub> 12.17 12.42 12.29 12.16 12.17 12.42 12.29 C8H8Al12Co4N84O48Si12 Zeolite 4A, (Co) Zeolite 5A 43- 144 19-1189 С 12.17 90.00 90.00 90.00 00000 90.00 90.00 90.00 90.00 90.00 90.00 90.00 90.00 C819k112C4(NaC485)12 NaCaAl3Si3O1212.6 (CS2)4Co4NaAl12Si12O48 (Pb9O(OH)4)Al12Si12O48 • HgO Zeolite 5A Zeolite A (Co,CS2) Zeolite A (Pb) 12.15 12.31 12.15 12.81

Zeolite Structure Type Name-Code

::						Z	eolite	Struc	cture 1	Type No	ате_	-Code	2	
:	Zeolite Name	PDF# O	lΜ		tronge flection		Cell a	Param b	eters	Cel α	l Angli β	es C	rys. Sys.	Chemical Formula
	Zeolito A, (Ag) Zeolito A, (Cd) Zeolito A, (Co,Br) Zeolito A, (Ca,Ca) Zeolito A, (Cb,Ca)	43- 148 45- 178 45- 188	00000	12.3 <sub>g</sub> 12.3 <sub>n</sub> 4.04 <sub>x</sub> 4.33 <sub>n</sub> 12.2 <sub>n</sub>	5.49 <sub>6</sub> 5.50 <sub>1</sub> 3.24 <sub>7</sub> 3.40 <sub>x</sub> 3.69 <sub>5</sub>	2.98g 4.101 4.953 3.69g 8.665	24.55 12.29 12.12 12.24 12.24	24.55 12.29 12.12 12.24 12.24	24.55 12.29 12.12 12.24 12.24	90.00 90.00 90.00 90.00 90.00	90.00 90.00 90.00 90.00 90.00	90.00 90.00 90.00 90.00 90.00	000	AlggHzzAg7oSig6Ozg.*xH2O CdsSizAlzOd**3H2O (CoBrzkNac(SizAlzOds)(Br2)z CszzAlzSiz2Od CszzAlzSizOd
	Zeolite A, (Cs,Ca) Zeolite A, (K) Zeolite A, (K,Za) Zeolite A, (Li) Zeolite A, (Np)	43- 147 43- 148 38- 242 31-1261	C C * *	3.68, 12.3, 12.1, 12.0, 3.31,	3.39 <sub>x</sub> 8.71 <sub>7</sub> 8.54 <sub>3</sub> 8.51 <sub>7</sub> 3.01 <sub>x</sub>	4.32 <sub>9</sub> 5.51 <sub>2</sub> 5.40 <sub>2</sub> 3.63 <sub>5</sub> 1.64 <sub>8</sub>	12.39	12,21 12,32 12,07 12,04 12,39	12.21 12.32 12.07 12.04 12.39	90.00 ° 90.00 90.00 90.00 90.00	90.00 90.00 90.00 90.00 90.00	90.00 90.00 90.00 90.00 90.00	000	Cs <sub>11.5</sub> Cs <sub>0.6</sub> Al <sub>12</sub> Si <sub>12</sub> O <sub>48</sub> K <sub>11.1</sub> Si <sub>12</sub> Al <sub>12</sub> O <sub>49</sub> *3.5H <sub>2</sub> O (Li,Na <sub>3</sub> Al <sub>12</sub> Si <sub>12</sub> O <sub>49</sub> *3.5H <sub>2</sub> O (Li,Na <sub>3</sub> Al <sub>1</sub> Si) <sub>15</sub> O <sub>4</sub> ,**xH <sub>2</sub> O 12Na*12(AlO <sub>2</sub> SiO <sub>2</sub> )*9.3Na <sub>2</sub> NO <sub>3</sub> *6.7H <sub>2</sub> O
	Zeolite A. (Na) Zeolite A. (Na) Zeolite A. (Na) Zeolite A. (Rb,Ag) Zeolite A. (Rb,Ag)	39- 222 39- 223 45- 185 45- 186	*00000	12.3 <sub>g</sub> 12.3 <sub>g</sub> 12.3 <sub>g</sub> 3.70 <sub>x</sub> 3.70 <sub>x</sub> 2.99 <sub>x</sub>	8.71 <sub>7</sub> 8.70 <sub>8</sub> 8.68 <sub>6</sub> 12.3 <sub>8</sub> 2.97 <sub>8</sub> 3.72 <sub>7</sub>	2.99 <sub>8</sub> 2.98 <sub>6</sub> 7.09 <sub>6</sub> 2.98 <sub>8</sub> 3.40 <sub>0</sub>	12.32 24.61 24.56 12.27 12.28 12.34	12.32 24.61 24.56 12.27 12.26 12.34	12.32 24.61 24.56 12.27 12.26 12.34	90.00 90.00 90.00 90.00 90.00	90.00 90.00 80.00 90.00 90.00	90.00 90.00 90.00 90.00 90.00	00000 0	NagAl <sub>3</sub> Si <sub>1,45</sub> O <sub>1,7</sub> 5,1H <sub>2</sub> O NagAl <sub>4</sub> SSi <sub>5</sub> C <sub>254</sub> *216H <sub>2</sub> O NagAl <sub>4</sub> SSi <sub>5</sub> C <sub>254</sub> Rb <sub>1.17</sub> A <sub>(21,26</sub> Al <sub>1</sub> S) <sub>11</sub> O <sub>48</sub> Rb <sub>1.18</sub> A <sub>(21,26</sub> Al <sub>1</sub> SSi <sub>12</sub> O <sub>49</sub> Rb <sub>1.18</sub> A <sub>(26,26</sub> Al <sub>12</sub> Si <sub>12</sub> O <sub>49</sub>
	Zeolite A, (Rb,Ag) Zéolite A, (Sr) Zeolite A, (Tl) Zeolite P-A	38- 243 38- 244	* *	2.99 <sub>x</sub> 4.36 <sub>x</sub> 12.2 <sub>x</sub>	12.4 <sub>9</sub> 2.52 <sub>6</sub> 2.96 <sub>9</sub>	3.297 2.766 8.60g	12.32 12.33 12.26	12.32 12.33 12.26	12.32 12.33 12.26	90.00 90.00 90.00	90.00 90.00 90.00	90.00 90.00 90.00	CCC	(Sr,Na <sub>2</sub> )Al <sub>2</sub> Si <sub>1,85</sub> O <sub>7,7</sub> *xH <sub>2</sub> O Tl <sub>2</sub> Al <sub>2</sub> Si <sub>1,85</sub> O <sub>7,7</sub> *xH <sub>2</sub> O Na <sub>2</sub> O*Al <sub>2</sub> O <sub>3</sub> *1.71SiO <sub>2</sub> *0.24P <sub>2</sub> O <sub>5</sub> *4.32H <sub>2</sub> O
, , ,								_		e LL'		100.00		* NG 0
	.gcr2 Linde L Linde L Portialite Zeolite L	38- 395	i C O	15.9 <sub>x</sub> 16.0 <sub>x</sub> 16.9 <sub>x</sub> 16.0 <sub>x</sub> 15.8 <sub>x</sub>	3.92 <sub>7</sub> 3.19 <sub>4</sub> 2.91 <sub>4</sub> 4.62 <sub>x</sub> 3.91 <sub>4</sub>	3.18 <sub>7</sub> 3.92 <sub>4</sub> 3.19 <sub>3</sub> 3.20 <sub>9</sub> 4.57 <sub>3</sub>	18.39 18.40 18.40 18.49	18.39 18.40 18.40 18.49	7.65 7.52 7.52 7.51	90.00 90.00 90.00 90.00	90.00 90.00	120.00 120.00 120.00 120.00	H H H X	Karral <sub>s</sub> Si <sub>4</sub> 760 <sub>18.53</sub> K <sub>2</sub> NaAl <sub>3</sub> Si <sub>5</sub> 00 <sub>4</sub> *TH <sub>0</sub> O K <sub>4</sub> Na <sub>5</sub> Al <sub>5</sub> Si <sub>2</sub> O <sub>7</sub> *21H <sub>2</sub> O K <sub>5</sub> NaCaAl <sub>12</sub> Si <sub>2</sub> O <sub>7</sub> *15H <sub>2</sub> O K <sub>5</sub> O-Na <sub>5</sub> O-Al <sub>5</sub> O <sub>3</sub> SiO <sub>7</sub> +1 <sub>2</sub> D
	Zeolito L Zeolite L Zeolite L Zeolite P-L	43- 560 44-1393 48- 514 38- 324	O C i	15.8 <sub>x</sub> 16.1 <sub>x</sub> 16.2 <sub>x</sub> 16.0 <sub>x</sub>	3.17 <sub>5</sub> 6.08 <sub>1</sub> 3.96 <sub>7</sub> 3.22 <sub>3</sub>	3.91 <sub>4</sub> 3.95 <sub>1</sub> 4.65 <sub>6</sub> 4.65 <sub>3</sub>	18.58 18.61 18.75	18.58 18.61 18.75	7.49 7.57 15.03	90.00 90.00 90.00	90.00	120.00 120.00 120.00	н н н	1.01K <sub>2</sub> O=0.9Na <sub>2</sub> O=Al <sub>2</sub> O <sub>3</sub> =6.2SiO <sub>7</sub> =5.0H <sub>2</sub> O K <sub>10</sub> Ga <sub>9</sub> Si <sub>27</sub> O <sub>72</sub> K <sub>2.05</sub> Ga <sub>9</sub> Si <sub>22</sub> Oi <sub>8.53</sub> 0.69K <sub>2</sub> O=Al <sub>2</sub> O <sub>3</sub> =1.59SiO <sub>2</sub> =0.38P <sub>2</sub> O <sub>3</sub> =2.53H <sub>2</sub> O
	gen Marie de la companya		_			0.04	36.95	Line 36.95	de Typ 36.95	e N—L:	<u>TN</u> 90.00	90.00	С	AlNaSiO4 • 1.03H <sub>2</sub> O
	NaZ-21 Unnamed zeolite Unnamed zeolite Z-21 Zeolite N	42- 21 26-1987 28-1923 27-1405 26-1988	CiOii	11.1 <sub>x</sub> 6.51 <sub>x</sub> 6.54 <sub>x</sub> 6.51 <sub>x</sub> 6.57 <sub>x</sub>	21.36 4.049 4.058 13.09 4.069	9.24s 3.70s 3.71s 3.70s 3.72s 2.13s	36.81 13.08 36.70 37.22 12.48	38.81 13.08 36.70 87.22 12.48	35.81 21.56 36.70 37.22 16.00	90.00 90.00 90.00 90.00 90.00	90.00 90.00 90.00 90.00	90.00 90.00 90.00 90.00 90.00	CTCCT	Co.144B. 428Al3No.039No2O8.019Si3 C4H,3NNa+Al5Si3O+3H2O No3Al5Si,2O4+2**EH2O Co.66H0.24Al2No.66No1.66O7.46Si2*2.8H2O Sr.ALSi-O
	Zeolite N, (Sr)	17- 755	0	4.56 <sub>x</sub>	2,341	2,13	12.40	_	lazzite		_	00.00	•	3
	ECR-1 Mazzito Omega Omega	47- 288 38- 426 23-1894 44- 11	0 i i 0	3.17 <sub>x</sub> 3.19 <sub>x</sub> 9.07 <sub>x</sub> 9.09 <sub>x</sub>	3.50 <sub>8</sub> 2.94 <sub>1</sub> 3.78 <sub>9</sub> 3.79 <sub>1</sub>	9.10 <sub>8</sub> 3.82 <sub>8</sub> 5.94 <sub>8</sub> 3.52 <sub>5</sub>	18.15 18.39 18.15	26.31 18.39 18.15	7.31 7.65 7.59	90.00 90.00 90.00	90.00 90.00 90.00	90.00 120.00 120.00 120.00	N H N H	Na <sub>2</sub> O-Al <sub>2</sub> O <sub>2</sub> -SiO <sub>3</sub> K <sub>2</sub> CaMgg(Si,Al) <sub>20</sub> O <sub>72</sub> -28H <sub>2</sub> O CAH <sub>2</sub> Al <sub>2</sub> NNaO <sub>5</sub> Si+H <sub>2</sub> O O.72(CH <sub>2</sub> ) <sub>4</sub> N-0.71Na <sub>2</sub> O-Al <sub>2</sub> O <sub>3</sub> -7.3SiO <sub>2</sub> =6.3H <sub>2</sub> O
	ZSM-4	34-1830 42- 309	0	9.18 <sub>x</sub> 3.53 <sub>x</sub>	3.82 <sub>7</sub> 3.16 <sub>x</sub>	3.54 <sub>6</sub> 2.92 <sub>9</sub>	18.31	18.31	7.68	90.00	90.00	120.00	x	C2.24H6.72Al2N0.66N81.84O17.06Si6.43*6.56H2O (C6H12N2(N82O)2.6(Al2O3)8.3(SiO2)22*5H2O
	ZSM-18 ZSM-18	43- 57 52- 144	o *	11.5 <sub>x</sub> 11.4 <sub>z</sub>	4.17 <sub>8</sub> 7.92 <sub>2</sub>	4.13 <sub>7</sub> 6.08 <sub>1</sub>	13.18	13.18	ZSM-1	90.00	90.00	120.00	Х	Al <sub>2</sub> Na <sub>0.18</sub> O <sub>24.29</sub> Si <sub>10.6</sub> *xH <sub>2</sub> O Si <sub>34</sub> O <sub>44</sub>
								-	ZSM-1.		-		_	mo sio
	Silicalite-2, (Ti) TASO-48 TASO-48 TeVK-I	43- 55 46- 862 46- 863 42- 12 42- 13	0000:	11.2 <sub>x</sub> 3.88 <sub>x</sub> 11.3 <sub>x</sub> 3.87 <sub>x</sub> 3.86 <sub>x</sub>	3.85 <sub>8</sub> 11.3 <sub>7</sub> 3.85 <sub>7</sub> 11.2 <sub>9</sub> 11.1 <sub>9</sub>	10.1 <sub>8</sub> 3.75 <sub>5</sub> 10.2 <sub>6</sub> 10.1 <sub>9</sub> 10.0 <sub>9</sub>	20.10 20.12 20.03	20.10 20.12 20.03	13.41 13.41 13.40	90.00 90.00 90.00	90.00	90.00 90.00 90.00	T X T T	TiO <sub>2</sub> -SiO <sub>2</sub> (IC <sub>4</sub> H <sub>2</sub> )/N <sub>2</sub> O-Al <sub>2</sub> O <sub>2</sub> -Nn <sub>2</sub> O-TiO <sub>2</sub> -SiO <sub>2</sub> ·H <sub>2</sub> O Nn <sub>0</sub> 020Al <sub>0</sub> 01 <sup>T</sup> i0.085 <sup>Si</sup> 0.08 <sup>O</sup> 2 C <sub>1</sub> H <sub>3</sub> B <sup>2</sup> N-Nn <sub>0</sub> O-Al <sub>2</sub> O <sub>3</sub> -SiO <sub>2</sub> -H <sub>2</sub> O Nn <sub>1.25</sub> Al <sub>2</sub> SiO <sub>22-N</sub> <sup>2</sup> -SiH <sub>2</sub> O
	Unnamed zeolite 2SM-11 2SM-11 2SM-11	42- 14 38- 246 38- 247 38- 248	0000	3.85 <sub>x</sub> 3.86 <sub>x</sub> 3.87 <sub>x</sub> 3.86 <sub>x</sub>	3.82 <sub>9</sub> 3.73 <sub>4</sub> 9.36 <sub>6</sub> 11.9 <sub>8</sub>	3.71 <sub>9</sub> 11.2 <sub>3</sub> 3.74 <sub>4</sub> 10.1 <sub>5</sub>	20.00	20.00	13.39	90.00	90.00	90.00	X X X	C <sub>18</sub> H <sub>31</sub> BrN-Na <sub>2</sub> O-B <sub>2</sub> O <sub>3</sub> -SiO <sub>2</sub> -H <sub>2</sub> O Na <sub>1,0</sub> Al <sub>3</sub> Si <sub>4</sub> gO <sub>96.53</sub> Na <sub>2</sub> -Al <sub>2</sub> -Sir <sub>3</sub> O-160°xH <sub>2</sub> O Na <sub>2</sub> -Al <sub>3</sub> -Sir <sub>3</sub> -O Si <sub>8</sub> O <sub>102</sub>
	ZSM-11 ZSM-11, (H)	42- 22 38- 195	0	11.1 <sub>x</sub> 3.86 <sub>x</sub>	10.0 <sub>5</sub> 11.3 <sub>8</sub>	3.85 <sub>5</sub> 10.1 <sub>5</sub>	20.07	20.07	18.41			90.00	x	H-Al <sub>2</sub> O <sub>3</sub> -SiO <sub>2</sub>
	Melanophlogite	25- 7	i	5.99 <sub>z</sub>	3.58g	5.477	26.79	26.79	13.40	ogite 90.00	90.00	90.00	7	C <sub>2</sub> H <sub>17</sub> O <sub>6</sub> • Si <sub>46</sub> O <sub>92</sub>
F	. Merlinoite	29- 989	i	3,18,	7.12,	7.089	14,12	<u>M</u> 14.23	erlino 9.95	ite—ME 90.00	<u>ER</u> 90.00	90.00	0	K <sub>5</sub> Ca <sub>2</sub> (A) <sub>9</sub> Si <sub>23</sub> O <sub>54</sub> )•24H <sub>2</sub> O
	Unnamed zeolite Zeolite K-M Zeolite P-W Zeolite Rb-M	52- 143 30- 902 38- 320 30-1043	ċ o o	4.21; 3.25; 3.19; 3.19;	2.77 <sub>8</sub> 3.19 <sub>x</sub> 3.25 <sub>7</sub> 5.07 <sub>8</sub>	4.49 <sub>6</sub> 2.97 <sub>x</sub> 7.20 <sub>6</sub> 4.82 <sub>6</sub>	14.19 10.07 24.17 10.25	14.19 14.22 24.17 14.30	9.23 14.22 10.03	90.00 90.00 90.00 90.00	90.00 90.00 90.00 90.00	90.00 90.00 90.00		BāşAlī <sub>0.57</sub> Cl <sub>9</sub> Si2 <sub>1.37</sub> O <sub>94</sub> *12H <sub>2</sub> O K <sub>2</sub> Al <sub>2</sub> Si <sub>3</sub> O <sub>10</sub> *3H <sub>2</sub> O 0.54K <sub>5</sub> O*Al <sub>2</sub> O <sub>9</sub> *1.73SiO <sub>2</sub> *0.37P <sub>2</sub> O <sub>5</sub> *2.98H <sub>2</sub> O Rb-Al-SiO <sub>2</sub> -H <sub>2</sub> O
			_						ZSM-	5—MFI			x	B₂SiO₃
	AMS-1B AMS-1B AMS-1Cr AMS-1Cr AMS-1Cr	42- 382 42- 383 43- 37 47- 766 47- 767	00000	3.84 <sub>x</sub> 3.84 <sub>x</sub> 11.0 <sub>x</sub> 11.0 <sub>x</sub> 3.80 <sub>x</sub>	3.72 <sub>5</sub> 3.72 <sub>5</sub> 3.85 <sub>x</sub> 3.85 <sub>9</sub> 11.0 <sub>8</sub>	11.4 <sub>4</sub> 11.2 <sub>5</sub> 10.0 <sub>8</sub> 10.0 <sub>7</sub> 10.0 <sub>8</sub>							X X X X	B <sub>2</sub> O <sub>2</sub> -SiO <sub>2</sub> C <sub>12</sub> O <sub>2</sub> -SiO <sub>2</sub> -H <sub>2</sub> O N <sub>2</sub> -C <sub>1</sub> -Si-O-C-H-N (NH <sub>4</sub> )-C <sub>1</sub> -Si-O
\ .	Natural ZSM-5 Nu-5 Nu-5 Silicalito Silicalito-1, (DIPA,F)	50-1665 42- 119 42- 120 44- 696 45- 739	i 0 0 i	3.85 <sub>x</sub> 3.86 <sub>x</sub> 3.86 <sub>x</sub> 11.1 <sub>x</sub>	3.75 <sub>x</sub> 11.1 <sub>7</sub> 11.1 <sub>9</sub> 10.0 <sub>8</sub> 3.84 <sub>x</sub>	11.2 <sub>8</sub> 3.82 <sub>7</sub> 8.83 <sub>7</sub> 8.82 <sub>3</sub> 10.0 <sub>9</sub>	20.22 20.05 20.05	20.00	13.40	90.00 90.00 90.00		90.00	X O	Ko.1, Ma2-96°03, 14Mga, 91411, 2625i44-910 192°80H4O C236B84,401881M2O)A31(Al2OA)SIO2/88°24.6H2O (Na2Obg-974AQO2/SIO2)70°0.97H2O SIO2 C216H76.8F4,8N4.8O102Si06°6.6H2O
	Silicalita-1, (TPA,F) Silicalita-1, (TRIPA,F) Silicate E TSZ	45- 737 45- 738 47- 715 43- 313	i i O i	11.1 <sub>x</sub> 11.1 <sub>x</sub> 3.83 <sub>x</sub> 3.86 <sub>x</sub>	9.96 <sub>9</sub> 3.84 <sub>s</sub> 11.1 <sub>6</sub> 11.2 <sub>8</sub>	3.83 <sub>9</sub> 9.99 <sub>9</sub> 3.72 <sub>5</sub> 10.1 <sub>8</sub>	20.04 20.05 20.16	19.93 19.89	13.38 13.38	90.00 90.00 90.51	90.00	90.00	X M	SigeO <sub>192</sub> ((C <sub>3</sub> H <sub>7</sub> ) <sub>4</sub> N) <sub>4</sub> F <sub>4</sub> SigeO <sub>122</sub> ((C <sub>3</sub> H <sub>7</sub> ) <sub>2</sub> NH) <sub>4</sub> F <sub>4</sub> *8H <sub>2</sub> O SiO <sub>2</sub> Nu <sub>2</sub> Al <sub>3</sub> SigeO <sub>56</sub> *32H <sub>2</sub> O
	TSZ TSVK-II	44- 115 42- 16 42- 17	0 0 i	3.86 <sub>x</sub>		3.82 <sub>7</sub> 3.82 <sub>2</sub> 3.82 <sub>2</sub>	20.08 20.11			90.00				Na <sub>2,02</sub> Al <sub>2</sub> Si <sub>34.1</sub> O <sub>73.2</sub> , *11.2H <sub>2</sub> O C <sub>8</sub> H <sub>20</sub> BrN-Na <sub>2</sub> O-Al <sub>2</sub> O <sub>3</sub> -SiO <sub>2</sub> -H <sub>2</sub> O Na <sub>1,8</sub> Al <sub>2</sub> Si <sub>103</sub> O <sub>203.0</sub> *xH <sub>2</sub> O
	TsVK-II USC-4 Unnamed zcolite	47- 718 42- 15	o i	11.1 <sub>x</sub> 4.06 <sub>x</sub> 3.84 <sub>x</sub>	3.33 <sub>7</sub> 3.81,	10.9 <sub>6</sub> 3.71 <sub>x</sub>	20.02	19.92	13.37	90.00 90.00	90.00	90.00	X	SiO <sub>2</sub> NaB <sub>2</sub> Si <sub>82</sub> O <sub>57.5</sub> *xH <sub>2</sub> O Na <sub>2.0</sub> Al <sub>2.9</sub> Si <sub>94.1</sub> O <sub>197</sub>
	Unnamed zeolite Unnamed zeolite Unnamed zeolite	48- 136 49- 78 49- 79	i * *	11.2 <sub>2</sub> 3.72 <sub>2</sub> 9.86 <sub>2</sub>	3.85,	9.97 <sub>3</sub> 3.82 <sub>6</sub> 3.82 <sub>4</sub>	20.11 19.86 19.87	20.11	13.40	90.00 90.00	90.56	90.00	M M	96SiOg*xlCi 96SiOg*xlBr
	Unnamed zeolite Unnamed zeolite Unnamed zeolite ZSM-6	49- 80 49- 81 37- 390	*	3.85 <sub>x</sub> 3.85 <sub>x</sub> 3.85 <sub>x</sub>	3.71 <sub>6</sub> 3.71 <sub>a</sub>	3.823	19.89 19.87	20.08	13.37	90.00 90.00	90.50	90.00	M	96SiO <sub>2</sub> °xl <sub>2</sub> Si <sub>90</sub> O <sub>192</sub> (Br <sub>9</sub> ) <sub>2</sub> Na <sub>1,78</sub> Al <sub>2</sub> Si <sub>21,1</sub> O <sub>86,1</sub>

11:7

Š.

The second second

Zeolite Structure Type Name—Code Crys. Chemical Sys. Formula 3 Strongest Cell Parameters Cell Angles PDF# QM Reflections b α Zeolite Name (C<sub>2</sub>H<sub>7</sub>)<sub>16</sub>N<sub>4</sub>Si<sub>36</sub>O<sub>192</sub>(ÖH)<sub>4</sub> Na<sub>0.3</sub>Al<sub>0.3</sub>Si<sub>30.7</sub>O<sub>172</sub>(C<sub>12</sub>H<sub>28</sub>NOH)<sub>4</sub> H<sub>0.3</sub>Al<sub>0.3</sub>Si<sub>35.6</sub>O<sub>192</sub> Na<sub>1.28</sub>Al<sub>2</sub>Si<sub>3</sub>T<sub>0</sub>O<sub>7.91</sub> Na<sub>2.2</sub>Al<sub>2</sub>Si<sub>3</sub>O<sub>180.1</sub> 90.00 90.00 90.00 90.00 90.00 90.67 3.72g 11.16 10.05 ZSM-6 ZSM-6 ZSM-6 20.10 19.95 39- 225 42- 23. 42- 24 43- 321 43- 322 90.00 20.02 19.90 13.38 19.88 ~20.11 13.37 11.3<sub>5</sub> 11.2<sub>4</sub> X ZSM-6 2SM-5 Al<sub>2</sub>O<sub>3</sub>-54SiO<sub>2</sub> Al<sub>2</sub>O<sub>3</sub>-54SiO<sub>2</sub> C<sub>50.4</sub>(Al<sub>0.9</sub>Si<sub>23.1</sub>O<sub>48</sub>) ZrSi<sub>24</sub>O<sub>59</sub> Na<sub>1.54</sub>H<sub>3.56</sub>(Al<sub>0.2</sub>)<sub>5.1</sub>(SiO<sub>2</sub>)<sub>90.9</sub> 3.83<sub>x</sub> 11,1<sub>x</sub> 11.1<sub>x</sub> 11.2<sub>x</sub> 3.86<sub>x</sub> 13.38 13.40 13.40 90.00 90.00 90,00 90,00 90.00 90.00 90.00 90.00 90.00 90.00 90.00 90.00 19.96, 20.10 20.08 19.96 19.90 19.92 11.17 9.945 ZSM-5 ZSM-5 ZSM-6 44-2 Č 9:917 10.0<sub>6</sub> 45- 120 47- 638 40- 64 10.Da 10.0a 3.72s ZSM-5 ZSM-5, (AJ) · Ca<sub>0.4</sub>(Al<sub>0.9</sub>Si<sub>23.1</sub>O<sub>49</sub>)\*2.4H<sub>2</sub>O Na<sub>1.85</sub>H<sub>3.6</sub>FeO<sub>2</sub>)<sub>5.45</sub>SiO<sub>2</sub>><sub>9.65</sub> H-Al<sub>2</sub>O<sub>3</sub>-SiO<sub>2</sub> Na<sub>2.6</sub>Al<sub>4</sub>(Si<sub>1.81.6</sub>O<sub>320.6</sub>) Tl<sub>3.25</sub>Al<sub>3.43</sub>Si<sub>92.57</sub>O<sub>192</sub>\*27.14H<sub>2</sub>O 90.00 90.00 ZSM-5, (Cs) ZSM-5, (Fe) ZSM-5, (H) ZSM-5, (Na) 9.97<sub>6</sub> 8.81<sub>7</sub> 3.85<sub>5</sub> 3.72<sub>5</sub> 20.10 19.93 13.43 90.00 45- 133 11.2<sub>x</sub> 3.85<sub>x</sub> 00000 39- 161 37- 359 37- 361 45- 191 11.3<sub>8</sub> 11.0<sub>8</sub> 11.1<sub>x</sub> 3.85 10.2 3.84<sub>x</sub> 3.85<sub>x</sub> X 19.93 90.00 90.00 90.00 20.11 .18.43 ZSM-5, (T1) 3.86<sub>x</sub> 11.2<sub>x</sub> 11.2<sub>x</sub> 11.2<sub>2</sub> 3.85<sub>8</sub> 3.86<sub>4</sub> 3.83<sub>6</sub> 9.99<sub>6</sub> 3.83<sub>6</sub> 9.98<sub>3</sub> 19.98 20.08 20.12 90.00 90.00 90.00 90.00 90.00 90.00 Na3.22Alz.48Sl90.52O190.9 Na9.6Al2.3Sigs.7O192\*x(CgH20N)\*xH2O H1.7Na0.6Al2.3Sigs.7O192 H4.65Na0.21(SiO2)91.02(AlO2)4.97\*24H2O 19.90 19.94 90.00 ZSM-8 ZSM-8 ZSM-8 0 0 0 X 41- 411 13.41 13.41 90.00 4R. 134 48- 135 49- 657 Zeolite HZSM-5 ZSM-57--MFS 6.93<sub>4</sub> 3.46<sub>6</sub> H<sub>1.5</sub>AJ<sub>1.5</sub>Si<sub>34.5</sub>O<sub>72</sub> H<sub>1.44</sub>Na<sub>0.56</sub>AJ<sub>2</sub>Si<sub>43</sub>O<sub>90</sub> 7.45 14.17 18.77 90.00 90,00 90.00 O X 45- 192 47- 635 ZSM-57, calcined Montesommaite—MON 46-1351 i 3.30<sub>x</sub> 3.13. 6.59a 10.10 17.31 90.00 90.00 90.00 O (K,Na)9Al9Si22O64 • 10H2O Montesommaite -MOR Mordenite-Na<sub>2</sub>O-Al<sub>2</sub>O<sub>3</sub>-SiO<sub>2</sub> Na-Fe-Si-O \*xH<sub>2</sub>O (Ca,Na<sub>3</sub>,K<sub>2</sub>)Al<sub>2</sub>Si<sub>10</sub>O<sub>24</sub> \*7H<sub>2</sub>O (Na<sub>2</sub>,Ca,K<sub>2</sub>)Al<sub>3</sub>Si<sub>10</sub>O<sub>24</sub> \*7H<sub>2</sub>O Na<sub>1,6</sub>Ga<sub>2</sub>Si<sub>10,9</sub>O<sub>25,6</sub> \*0.21C<sub>26</sub>H<sub>44</sub>N<sub>2</sub>O 90.00 90.00 90.00 90,00 90.00 90.00 90.00 18.15 18.17 18.16 18.11 7.31 7.49 7.54 7.53 7.53 90.00 90.00 47- 288 48- 513 6- 239 3.17<sub>x</sub> 3.47<sub>x</sub> 3.48<sub>x</sub> 3.50a 4.00a 3.22z 26.31 20.52 00000 .0 ECR-1 9.10<sub>5</sub> 3.23<sub>6</sub> Ferrimordenite Mordenite 9.109 20.45 20.51 90.00 29-1257 47- 410 9.06 4.007 90.00 4.006 18.08 20.49 90.00 90.00 90.00 Mordenite Cae,32Ba, xt(A)<sub>8</sub>,6Si<sub>39,9</sub>O<sub>96</sub>
CaAl<sub>2</sub>Si<sub>30</sub>O<sub>24</sub>\*7H<sub>2</sub>O
Cs<sub>5,6A</sub>l<sub>4</sub>Si<sub>40</sub>O<sub>56</sub>
CNH<sub>4</sub>L<sub>4,7</sub>N<sub>4</sub>Al<sub>4,4</sub>2Si<sub>43,56</sub>O<sub>96</sub>\*2H<sub>2</sub>O
Na<sub>2</sub>Al<sub>2</sub>Si<sub>40</sub>O<sub>24</sub>\*7H<sub>2</sub>O 13.5<sub>2</sub> 8.48<sub>2</sub> 3.47<sub>2</sub> 9.06<sub>2</sub> 8.99<sub>2</sub> 8.22<sub>9</sub> 13.6<sub>x</sub> 3.46<sub>x</sub> 44- 48 11- 155 C 3.43<sub>2</sub> 9.10<sub>8</sub> 17,97 20.32 7.42 90.00 90.00 90.00 0 Mordenite, (Ba) Mordenite, (Ca)
Mordenite, (Cs)
Mordenite, (NH4)
Mordenite, (Na) 90.00 90.00 90.00 90.00 C \* 0 90.00 90.00 7.51 7.48 44-1391 43- 171 3.99<sub>6</sub> 18.19 18.13 20.32 6.96 6.80 6.41 0.345Li<sub>2</sub>O • 0.36Na<sub>2</sub>O • Al<sub>2</sub>O<sub>3</sub> • 10.2SiO<sub>2</sub> • 6.6H<sub>2</sub>O 38- 318 44-1387 46- 860 46- 861 3.44<sub>x</sub> 13.6<sub>x</sub> 9.03<sub>x</sub> 9.03<sub>x</sub> 9.02<sub>6</sub> 3.45<sub>4</sub> 3.99<sub>5</sub> 3.99<sub>6</sub> 3.96<sub>7</sub> 3.98<sub>3</sub> 3.47<sub>5</sub> Mordenite, (Na,Li) 90.00 90.00 90.00 18.13 20.41 TASO-38 TASO-38 3.47 ŏ 90.00 90.00 90.00 18.07 20.28 Zcolite Al-mordenite 49- 924 3.45 3.97 7.49 Na<sub>1.5</sub>Ga<sub>2</sub>Si<sub>19</sub>O<sub>415</sub> SrAl<sub>2</sub>Si<sub>10</sub>O<sub>24</sub>•7H<sub>2</sub>O 20.44 20.50 Zeolito Ga-mordenite Zeolite M, (Sr) 3.47<sub>x</sub> 3.48<sub>x</sub> 3.98<sub>6</sub> 3.23, 3,22<sub>5</sub> 2,92<sub>4</sub> 18.07 18.13 7.51 7.52 90.00 90.00 90.00 0 90.00 ZSM-39 MTN C<sub>6.04</sub>H<sub>18,12</sub>N<sub>2.02</sub>\*0.54N<sub>22</sub>O\*Al<sub>2</sub>O<sub>3</sub>\*87SiO<sub>3</sub>\*3.97H<sub>2</sub>O (N<sub>2.</sub>A<sub>7</sub>,CH<sub>2</sub>)<sub>6</sub>N(CH<sub>2</sub>)<sub>5</sub>,CO<sub>3</sub>l<sub>6</sub>Si<sub>136</sub>O<sub>27</sub>\* Si<sub>136</sub>O<sub>277</sub>(N<sub>2</sub>,O<sub>2</sub>,A<sub>7</sub>)<sub>13</sub>C<sub>5</sub>H<sub>10</sub>NH<sub>1</sub> C<sub>2</sub>H<sub>2</sub><sub>4</sub>N<sub>2</sub>O<sub>5</sub>SiO<sub>3</sub>-(NH<sub>4</sub>)<sub>2</sub>O-L<sub>2</sub>O<sub>3</sub>-H<sub>2</sub>O CH<sub>2</sub>N H-SiO<sub>2</sub>-H<sub>2</sub>O 4.31<sub>8</sub> 3.28<sub>8</sub> 5.88<sub>6</sub> 3.71<sub>6</sub> 5.86<sub>8</sub> CF-3 Dodecasil-3C Dodecasil-3C ZSM-39 ZSM-39 39- 155 39- 227 45- 284 40- 136 11.2<sub>x</sub> 3.73<sub>g</sub> 3.74<sub>x</sub> 5.55<sub>x</sub> 3.74<sub>x</sub> 3.69<sub>5</sub> 5.85<sub>2</sub> 3.28<sub>9</sub> 3.26<sub>6</sub> 3.28<sub>8</sub> 00\*00 XCTCT 19.40 13.68 19.27 19.40 13.68 19.27 90.00 90.00 90.00 90.00 90.00 90.00 90.00 90.00 90.00 90.00 41- 553 13.69 90.00 90.00 Ne<sub>0.01</sub>Al<sub>0.0046</sub>Si<sub>1.5</sub>O<sub>3.04</sub>\*((CH<sub>3</sub>)<sub>4</sub>N,C<sub>3</sub>H<sub>7</sub>NH<sub>2</sub>)<sub>0.06</sub>\*xH<sub>2</sub>O SiO<sub>2</sub> 47- 719 47- 720 5.83<sub>9</sub> 5.56<sub>9</sub> ZSM-39 ZSM-39 19.40 19.40 19.40 90.00 90.00 90.00 ZSM-23--MTT Na<sub>1.8</sub>Al<sub>2</sub>Si<sub>74</sub>O<sub>151.9</sub> Al<sub>2</sub>O<sub>3</sub>•32.7SiO<sub>2</sub>•x(C<sub>2</sub>H<sub>18</sub>NO)•zNa<sub>2</sub>O Na<sub>0.18</sub>Al<sub>2</sub>N<sub>4.18</sub>Si<sub>67.9</sub>O<sub>140.98</sub> Al<sub>2</sub>Si<sub>0.6</sub>O<sub>120.33</sub> Si<sub>24</sub>O<sub>48</sub> 43- 15 48- 495 43- 582 44- 102 10.9<sub>x</sub> 3.92<sub>x</sub> 3.90<sub>x</sub> 3.90<sub>x</sub> 10.8<sub>g</sub> 4.51<sub>x</sub> 3.73<sub>x</sub> 3.72<sub>8</sub> 3.69<sub>x</sub> 4.55<sub>7</sub> 4.26<sub>8</sub> 4.27<sub>7</sub> 4.47<sub>g</sub> 00000 XXXX IS1-4 SSZ-32 ZSM-23 3.73a 11.1g 90.00 90.00 90.00 5.01 21.52 11.13 46- 570 10.9, Alo 295Nao 012Si 15.9O22.25 37- 411 n Zeolite KZ-1 ZSM-12 -MTW  $\begin{array}{l} Na_{0,\gamma 0}A_{2}Si_{0,4} > 0_{13}, *2.76C_{6}H_{1,4}NO*2H_{2}O\\ ((C_{2}H_{6})_{4}N)_{2}O-Al_{2}O_{3}-TiO_{7}Na_{2}O-SiO_{7}H_{2}O\\ Na_{1,1}a_{1}A_{2}Si_{77,4}O_{18,0,4}\\ C_{2}C_{4}H_{1,4}N_{2}(*0-1.8Na_{2})^{*}Al_{2}O_{3}*78SiO_{2}\\ Na_{4}A.Si-O-C_{17}H_{44}N_{6}H_{2}O\\ \end{array}$ CZH-5 TASO-49 ZSM-12 47- 721 46- 864 43- 439 4.07<sub>x</sub> 3.87<sub>9</sub> 3.87<sub>7</sub> 3.87<sub>6</sub> 11.8<sub>8</sub> 12.1<sub>8</sub> 3.96<sub>4</sub> 3.64<sub>4</sub> 0 4.24<sub>x</sub> 4.31<sub>x</sub> 4.29<sub>a</sub> 4.24<sub>x</sub> 12.60 11.10 24.40 M 90.00 108.00 90.00 44- 68 47- 708 90.00 107.70 90.00 -MWW MCM-22-Al<sub>2</sub>O<sub>3</sub>•215iO<sub>2</sub> Al<sub>2</sub>O<sub>3</sub>•SiO<sub>2</sub>•C<sub>13</sub>H<sub>26</sub>NOH K(SiAl)O<sub>2</sub> K<sub>2</sub>(Al<sub>2</sub>Si<sub>1-2</sub>)O<sub>2</sub> 12.5<sub>x</sub> 12.3<sub>x</sub> 11.1<sub>7</sub> 8.85<sub>5</sub> 3.42<sub>7</sub> 8.80<sub>5</sub> 3.42<sub>7</sub> 11.0<sub>9</sub> 3.43<sub>x</sub> 13.8<sub>x</sub> 12.3<sub>x</sub> 12.3<sub>x</sub> 12.3<sub>x</sub> MCM-22 48- 75 46- 267 0 X 50-1679 14.10 14.10 25,20 90.00 90.00 120.00 ò X SSZ-25, colcined Zeolite MCM-22 14.11 14.11 24.88 90.00 90.00 120.00 H237Na3,10(Alo35B5.11Si66.53)O144 Natrolite -NAT (Na,Ca)<sub>2</sub>(Si,Al)<sub>3</sub>O<sub>10</sub>\*2H<sub>2</sub>O CaNa<sub>4</sub>Si<sub>6</sub>Al<sub>4</sub>O<sub>20</sub>\*7H<sub>2</sub>O (Ca,Na)<sub>2</sub>(Si,Al)<sub>5</sub>O<sub>10</sub>\*3H<sub>2</sub>O (Na,Ca)<sub>2</sub>(Si,Al)<sub>5</sub>O<sub>10</sub>\*3H<sub>2</sub>O Na<sub>2</sub>Ca<sub>2</sub>Al<sub>6</sub>Si<sub>9</sub>O<sub>30</sub>\*8H<sub>2</sub>O 90.00 90.00 90.00 90.00 90.00 2.90<sub>x</sub> 2.92<sub>x</sub> 2.90<sub>x</sub> 2.88<sub>x</sub> 2.89<sub>x</sub> 5.90<sub>9</sub> 5.93<sub>8</sub> 5.90<sub>9</sub> 5.92<sub>5</sub> 2.87<sub>7</sub> 4.41<sub>6</sub> 4.44<sub>6</sub> 4.41<sub>9</sub> 3.21<sub>5</sub> 5.90<sub>7</sub> 42-1381 13.25 13.25 6.60 90.00 90.00 Ca-Tetranatrolite TTTO 13.25 13.38 13.29 13.21 90.00 90.00 90.00 90.00 90.00 90.00 90.00 13.38 13.29 Connerdite 10- 473 42-1380 ċ Connordite 45-1324 13.21 6.53 6.62 18.47 24-1064 56.70 90.00 Na<sub>1.94</sub>(Ga<sub>1.94</sub>Si<sub>3.08</sub>O<sub>10</sub>)+2H<sub>2</sub>O Na<sub>2</sub>Al<sub>2</sub>Si<sub>3</sub>O<sub>10</sub>+2H<sub>2</sub>O 44- 49 45-1413 33-1243 5.94<sub>x</sub> 5.89<sub>x</sub> 5.66<sub>x</sub> 3.83<sub>x</sub> 6.92<sub>x</sub> 6.58<sub>6</sub> 2.87<sub>5</sub> 3.00<sub>x</sub> 2.98<sub>x</sub> 2.97<sub>8</sub> 2.89<sub>5</sub> 6.54<sub>5</sub> 5.86<sub>9</sub> 2.50<sub>7</sub> 3.00<sub>5</sub> C \* 0 18.42 18.83 90.00 90.00 90.00 0 NAT 90.00 90.00 Natrolite Nn2Gn2Si3O10 Nn3Gn2Si3O10 Nn3Gn2Si3O10 K2Al2Si3O10\*2H2O Natrolite, (Ga) Natrolite, (Ga) ö í 19.81 6.50 90.00 90.00 90.00 19.34 Natrolite, (K) 38- 337 Nu<sub>2</sub>Al<sub>2</sub>Si<sub>3</sub>O<sub>10</sub> • 3H<sub>2</sub>O Nu<sub>2</sub>K<sub>0.25</sub>(Al,Si)<sub>5</sub>O<sub>10</sub> • 3H<sub>2</sub>O CaAl<sub>2</sub>Si<sub>3</sub>O<sub>10</sub> • 3H<sub>2</sub>O 35- 458 42-1386 41-1355 33-1205 2.94, 6.75, 6.63, 2.87, 4.44<sub>4</sub> 2.90<sub>5</sub> 5.87<sub>6</sub> 4.39<sub>5</sub> 90.00 90.00 90.00 90.00 90.00 5.92 19.07 19.13 19.21 6.58 6.59 90.00 Paranatrolite 0 18.93 18.48 Paranatrolite Na2Al2Si3O10 2H2O Tetranatrolite NU-87 NES 90.00 90.00 90.00 Na<sub>2</sub>Mg<sub>2</sub>Ca<sub>5</sub>Al<sub>19</sub>Si<sub>117</sub>O<sub>272</sub>\*93H<sub>2</sub>O Na<sub>3</sub>Mg<sub>3</sub>Ca<sub>5</sub>Al<sub>19</sub>Si<sub>117</sub>O<sub>272</sub> Na<sub>2</sub>Al<sub>2</sub>SiO<sub>6</sub> Na<sub>0.28</sub>Al<sub>2</sub>Si<sub>27.6</sub>O<sub>78.34</sub>\*xC<sub>16</sub>H<sub>38</sub>N<sub>2</sub>Br<sub>2</sub> 25.21 25.21 22.66 22.66 Gottardiite 49-1831 48- 39 Gottordilte Zeolite Nu-87 Zeolite Nu-87, (Na)

Zeolite Structure Type Name—Code Crys. Chemical 3 Strongest : Cell Parameters Cell Angles eolite Name PDF# QM Sys. Formula Reflections -NON Nonasil-823 ★ 25 C 90.00 90.00 O 90.00 90.00 O C<sub>20</sub>H<sub>52</sub>N<sub>4</sub> • 88SiO<sub>2</sub> Si<sub>88</sub>O<sub>176</sub>(C<sub>5</sub>H<sub>11</sub>NH<sub>2</sub>)<sub>4</sub> 13.63 90.00 4.80<sub>x</sub> 4.31<sub>x</sub> 15.06 15.08 22.23 13.68 90.00 Offretite -OFF (K,Ca,Mg)sAl<sub>2</sub>Si<sub>13</sub>O<sub>28</sub>\*14H<sub>2</sub>O (K,Ca,Mg)sAl<sub>2</sub>Si<sub>12</sub>O<sub>28</sub>\*14H<sub>2</sub>O (K,Na)Al<sub>2</sub>Si<sub>19</sub>O<sub>188</sub>, Ca<sub>2</sub>Si<sub>1</sub>O<sub>2</sub>Na<sub>2</sub>Na<sub>2</sub>O<sub>20</sub>\*2\*xH<sub>2</sub>O Ca<sub>2</sub>Si<sub>1</sub>O<sub>2</sub>Na<sub>2</sub>Ra<sub>2</sub>O<sub>20</sub>Al<sub>2</sub>Si<sub>7,8</sub>O<sub>20,72</sub>\*xH<sub>2</sub>O K<sub>2,04</sub>Na<sub>2,06</sub>Al<sub>2</sub>Si<sub>7,8</sub>O<sub>20,7</sub> fretite fretite inamed zeolite inamed zeolite inamed zeolite inamed zeolite 22- 803 25-1186 47- 858 47- 638 11.5<sub>x</sub> 11.5<sub>x</sub> 9.32<sub>x</sub> 11.5<sub>x</sub> 11.4<sub>x</sub> 2.88<sub>7</sub> 3.77<sub>2</sub> 6.88<sub>3</sub> 3.74<sub>7</sub> 3.75<sub>2</sub> 7.58 7.58 90.00 90.00 13 29 120.00 120.00 13.29 90.00 120.00 8.57<sub>6</sub> 2.83<sub>7</sub> 13.29 13.16 90.00 47- 637 13.16 90.00 90.00 120.00 42- 308 42- 374 43- 578 11.6<sub>x</sub> 6.59<sub>x</sub> 11.6<sub>x</sub> 3.76<sub>9</sub> 11.4<sub>8</sub> 3.76<sub>9</sub> 3.59<sub>9</sub> 3.58<sub>6</sub> 3.59<sub>9</sub> Na<sub>2</sub>O-K<sub>2</sub>O-Al<sub>2</sub>O<sub>3</sub>-SiO<sub>2</sub> K-Na-Al<sub>2</sub>-Si-O-H<sub>2</sub>O C<sub>64</sub>H<sub>17.9</sub>N<sub>1.3</sub>O<sub>1.20\*</sub>K<sub>0.94</sub>Na<sub>0.25</sub>Al<sub>2</sub>Si<sub>10.8</sub>O<sub>25.2</sub> M-34 13.11 15.05 9Q.00 90.00 120.00 Partheite-PAR 8.78 9.31 90.00 91.47 90.00 M Ca2AL6Si4O15(OH)2+4H2O . Leite 36- 378 10.8, 8.12a 6.107 21.59 Paulingite-PAU 90.00 90.00 90.00 90.00 C 90.00 C 90.00 C 90.00 C  $\begin{array}{l} \text{Na}_{1.22}\text{Eb}_{0.60}\text{Al}_{2}\text{Si}_{6.66}\text{O}_{17.03}\text{=}0.12\text{C}_{16}\text{H}_{40}\text{N}_{7}\text{O} \\ \text{-} \text{KyCa}(\text{Si}_{16}\text{Al}_{2})\text{O}_{42}\text{=}22\text{H}_{2}\text{O} \\ \text{K}_{2.26}\text{Na}_{0.28}\text{Ba}_{1.26}\text{Ca}_{2.67}\text{Al}_{11.65}\text{Si}_{20.59}\text{O}_{64}\text{=}27\text{H}_{2}\text{O} \\ \text{K}_{0.68}\text{Na}_{1.66}\text{Al}_{2}\text{Si}_{6.16}\text{O}_{16.29}\text{=}0.09\text{C}_{16}\text{H}_{40}\text{N}_{2}\text{O} \end{array}$ 3.08<sub>x</sub> 3.08<sub>x</sub> 3.08<sub>x</sub> 3.25<sub>x</sub> 35.10 35.11 3.26<sub>9</sub> 4.78<sub>6</sub> 3.26<sub>7</sub> 6.87<sub>8</sub> 35.10 35.11 90.00 B-18 úlingite 47- 354 35.10 39-1378 50-1604 48- 536 35.11 35.12 90.00 -85 12 90.00 Phillipsite--PHI Bn(Si<sub>2</sub>Al<sub>2</sub>)O<sub>8</sub>=3H<sub>2</sub>O NaAl<sub>2</sub>Si<sub>3</sub>O<sub>18</sub>=6H<sub>2</sub>O Bn-Al-Si-H<sub>2</sub>O (Bn,Na)=Al=SiO<sub>4</sub>=H<sub>2</sub>O (Bn,Li)AlSiO<sub>4</sub>=H<sub>2</sub>O 39-1377 12- 687 30- 107 30-1158 3.13<sub>x</sub> 4.08<sub>x</sub> 8.24<sub>x</sub> 4.07<sub>x</sub> 4.08<sub>x</sub> 3.17<sub>7</sub>
7.10<sub>8</sub>
3.12<sub>x</sub>
8.16<sub>8</sub> 90.00 124.43 90.00 M in motome in motome, (Na) 9.88 14.13 8.68 Harmotome, (Na)
Phase M. (Ba)
Phase M. (Ba,Li)
Phase M. (Ba,Na)
Philipsite
Philipsite
BOZII
Dhnamed zeolite 000 30- 743 39-1375 51-1497 47- 764 24-1046 3.21<sub>x</sub> 3.19<sub>x</sub> 4.01<sub>x</sub> 7.16<sub>7</sub> 7.14<sub>8</sub> 5.07<sub>8</sub> 7.18<sub>6</sub> 5.05<sub>7</sub> 4.21<sub>8</sub> 90.00 90.00 KCa(SisAla)O15\*6H2O 80.00 124.32 Noacastarijois-oto; (K2\_6Na)Al4\_9Si<sub>11.3</sub>O<sub>22</sub>\*13H<sub>2</sub>O C<sub>6</sub>H<sub>18</sub>N-Al2O<sub>2</sub>-SiO<sub>2</sub>-Na<sub>2</sub>O-H<sub>2</sub>O Na<sub>6,4</sub>Al<sub>6,4</sub>Si<sub>8,5</sub>O<sub>32</sub>\*4.6H<sub>2</sub>O Li<sub>2</sub>Na<sub>6,6</sub>Si<sub>2</sub>Al<sub>2</sub>O<sub>8,25</sub>\*6H<sub>2</sub>O 90.00 000 90.00 90.00 ed zeolite 6.58<sub>2</sub> 3.868 3.737 9.53 9.53 9.10 90.00 Dinamed zeolite 34-1857 C30,24Ne0,4Sl2,4Al2Ov\*4.8H2O (K,Na),2(Si,Al)<sub>2</sub>Ou\*4H<sub>2</sub>O Na),2Al2Si,2Ou\*27H2O K(Ca,Ba)(Si,Al2)Ou\*6H<sub>2</sub>O (K2)<sub>0,45</sub>Ca<sub>0,62</sub>Al2Si<sub>4</sub>O<sub>13</sub>\*1H<sub>2</sub>O 3.17<sub>9</sub> 4.10<sub>4</sub> 2.66<sub>6</sub> 4.11<sub>7</sub> 3.14<sub>8</sub> 34-1458 46-1427 47- 162 39-1376 4.77<sub>z</sub> 3.19<sub>x</sub> 3.14<sub>x</sub> 7.14<sub>z</sub> 3.20<sub>z</sub> 2.94, 7.11<sub>8</sub> 4.07<sub>6</sub> 3.19<sub>x</sub> 7.18<sub>9</sub> Ujpamed zeolite Uppamed zeolite 0 i 0 i 8.76 14.24 8.69 90.00 110.20 90.00 Unnamed zeolite 8.71 14.29 124.65 90.00 90.00 90.00 Wellsite Zolite H 16- 715 Rho-RHO Li<sub>24</sub>Bo<sub>24</sub>P<sub>24</sub>O<sub>96</sub>\*40H<sub>2</sub>O Rb<sub>24</sub>Bo<sub>24</sub>Ao<sub>24</sub>O<sub>96</sub>\*40H<sub>2</sub>O Li<sub>24</sub>Bo<sub>24</sub>Ao<sub>24</sub>O<sub>96</sub>\*40H<sub>3</sub>O Co<sub>0.55</sub>Na<sub>1.05</sub>Ga<sub>2</sub>Si<sub>2.45</sub>O<sub>8.14</sub>\*xH<sub>2</sub>O (Ca,Li)<sub>11</sub>Li<sub>8</sub>Bo<sub>24</sub>(PO<sub>4</sub>)<sub>24</sub>\*38H<sub>2</sub>O 18.61 14.24 14.06 14.84 90.00 90.00 90.00 90.00 90.00 90.00 90.00 2.90<sub>x</sub> 3.81<sub>x</sub> 3.76<sub>x</sub> 3.32<sub>x</sub> 9.60<sub>x</sub> 90,00 90,00 90,00 46- 292 48- 516 47- 248 3.64<sub>8</sub> 3.04<sub>9</sub> 3.14<sub>7</sub> rilophosphate-R 9.61<sub>x</sub> 3.18<sub>x</sub> 14.24 14.06 9.97s 10.6s 3.68s 46- 539 14.84 80.00 90.00 90.00 90.00 sapaite 90.00 90.00 90.00 90.00 90.00 3.23<sub>4</sub> 6.09<sub>4</sub> 3.44<sub>5</sub> 10.6<sub>1</sub> 3.01<sub>g</sub> 5.90<sub>3</sub> 3.52<sub>3</sub> 3.26<sub>6</sub> 3.52<sub>9</sub> 3.89<sub>g</sub> 90.00 90.00 90.00 90.00 90.00 Tl<sub>8.92</sub>Al<sub>13</sub>Si<sub>37</sub>O<sub>96</sub> • 1.2H<sub>2</sub>O Al<sub>12</sub>H<sub>12</sub>Si<sub>36</sub>O<sub>96</sub> NaCaAlSiO • xH<sub>2</sub>O 10.2<sub>x</sub> 10.5<sub>x</sub> 10.3<sub>x</sub> 14.46 14.99 14.60 14.95 14.46 14.99 14.60 90.00 90.00 90.00 46- 553 27- 15 OHO (TI) 27-1086 (NH<sub>4</sub>)<sub>0.9</sub>Cs<sub>0.7</sub>Al<sub>10.8</sub>Si<sub>37.4</sub>Os<sub>5</sub>•xH<sub>2</sub>O Rb<sub>11.7</sub>Be<sub>24</sub>P<sub>24</sub>O<sub>26</sub> 14.95 14.95 90.00 . ]?вь,В₀,Р) 13.48 90.00 T117.7Be24A924O96 T121.2Be24P34O96 NagC32A12Si3EO96\*73H2O Ce0.08Nal.94A12Si5.8O15.6 (NH4)12A12Si56O96 153 (N.Be,As) BAS (N.Be,P) 3.30, 4.83, 10.6, 3.47, 2.84, 3.13<sub>g</sub> 3.22<sub>g</sub> 3.36<sub>g</sub> 6.00<sub>6</sub> 3.09<sub>g</sub> 14.00 13.65 15.03 14.70 14.00 18.65 16.03 90.00 90.00 90.00 90.00 90.00 90.00 90.00 90.00 90.00 90.00 90.00 90.00 4.43<sub>2</sub> 4.32<sub>2</sub> 3.54<sub>2</sub> 10.4<sub>2</sub> 14.00 18.65 46-.554 46-.555 CCC 39-1366 15.03 59 14.70 14.70 90.00 ċ 44-1498 14.48 90.00 90.00 \(\text{NH\_1}\text{M1\_2SigeOs}\)
\(\text{NH\_1}\text{M1\_2SiseOs}\)
\(\text{NH\_1}\text{M1\_2SiseOs}\)
\(\text{Co\_{14}\text{NA}}\text{1\_2SiseO}\)
\(\text{Co\_{14}\text{NA}}\text{1\_2SiseOs}\)
\(\text{M2\_2SiseOs}\text{1\_2SiseOs}\)
\(\text{M2\_2SiseOs}\text{1\_2SiseOs}\)
\(\text{C1\_{14}\text{M2\_2SiseOs}\text{1\_2SiseOs}\)
\(\text{Na}\text{1\_2SiseOs}\text{1\_2SiseOs}\text{1\_2SiseOs}\)
\(\text{Na}\text{1\_2SiseOs}\text{1\_2Sis 1.33<sub>g</sub> 2.91<sub>g</sub> 3.44<sub>5</sub> 3.13<sub>2</sub> 3.36<sub>6</sub> 44-1499 44-1500 43- 53 45- 129 3.39g 8.49g 10.3g 9.90g 3.54g 5.88<sub>g</sub> 2.54<sub>g</sub> 3.26<sub>5</sub> 3.74<sub>3</sub> 10.6<sub>9</sub> 14.40 14.82 14.60 14.00 14.40 14.82 14.60 14.00 14.40 14.82 14.60 14.00 15.03 90.00 90.00 90.00 90.00 AD DO 90.00 (Rb) (NH4) Rb2 (NH4) Rb5 (Na,Ca) Zb0He,Rho, (Rb,Be,As) Zb0He,RHO 90.00 90.00 90.00 90.00 15.03 90.00 -RON Roggianite-. Voggianite 90.00 90.00 T Be<sub>2</sub>Ca<sub>4</sub>Al<sub>4</sub>Si<sub>7</sub>O<sub>24</sub>(OH)<sub>4</sub> • 3H<sub>2</sub>O 18.37 18.37 9.18 39- 366 13.0. 9.16 3.414 RUB-3-RTE 102.23 90.00 M 102.22 90.00 M (C<sub>17</sub>H<sub>13</sub>N)<sub>x</sub>SiO<sub>2</sub> SiO<sub>2</sub> 50-1695 50-1708 9.66<sub>x</sub> 4.96<sub>9</sub> 6.27<sub>4</sub> 4.33<sub>8</sub> 4.53<sub>2</sub> 7.43 7.43 90.00 90.00 Ť RUB-13--RTH C16H3.36N1.6°Si30.4B1.6O64 C11H27\*Si30.4B1.6O64 96.58 96.58 90.00 M 90.00 M 50-1877 9.83 9.83 90.00 9 66 NU-1, as-synthesized RUB-10-RUT 48- 747 43- 52 47- 594 47- 596 52-1184 Al<sub>2</sub>Si<sub>60</sub>O<sub>103</sub> C<sub>1.2</sub>H<sub>3.6</sub>Al<sub>2</sub>N<sub>0.3</sub>Na<sub>1.4</sub>O<sub>107.7</sub>Si<sub>52</sub>\*6H<sub>2</sub>O H<sub>1.99</sub>Na<sub>0.0</sub>3Al<sub>2</sub>Si<sub>50</sub>O<sub>104</sub> Na-Al-Si-O-H<sub>2</sub>O-C<sub>4</sub>H<sub>12</sub>N 4.03<sub>x</sub> 4.01<sub>x</sub> 4.03<sub>x</sub> 4.07<sub>x</sub> 4.03<sub>x</sub> 6.19<sub>8</sub> 3.83<sub>6</sub> 6.19<sub>8</sub> 3.90<sub>7</sub> 3.87<sub>7</sub> 3.857 6.17e 3.857 4.00s 3.946 Ó X M X 13.10 12.90 12.40 90.00 113.50 90.00 000 Sias TiO<sub>T2</sub> H<sub>2</sub>O SiO<sub>2</sub>-Al<sub>2</sub>O<sub>3</sub>-NH<sub>4</sub>F-(CH<sub>4</sub>)<sub>4</sub>NCl-H<sub>2</sub>O 49- 933 8.32 4.07 3.98 STA-1--SAO C<sub>2</sub>H<sub>2</sub>N+[Mg<sub>5</sub>Al<sub>23</sub>P<sub>28</sub>O<sub>112</sub>] Mg<sub>0.5</sub>Al<sub>0.8</sub>PO<sub>4</sub> 90.00 90.00 6.38<sub>1</sub>
5.86<sub>2</sub> 21.65 22.02 90.00 90.00 90.00 90.00 4.44<sub>1</sub> 4.51<sub>6</sub> 61-1757 SAS STA-6 90.00 90.00 T Zno.sAlo.sPO4 61-1754 5.46. 4.22 4.68 14.33 14.83 10.44 90.00 STA-2 SAT C<sub>54</sub>H<sub>102</sub>N<sub>6</sub>\*(Mg<sub>5.4</sub>Al<sub>20.6</sub>P<sub>36</sub>O<sub>344</sub>) Mg<sub>0.3</sub>Al<sub>0.8</sub>PO<sub>4</sub> 90.00 120.00 R 90.00 120.00 R 49. 620 С 4.10<sub>5</sub> 12.76 13.23 12.78 30.94 13.23 30.63 90.00 5.44<sub>a</sub> 4.25<sub>a</sub> 51-1756 UCSB-8Co--SBE MOCH SC 90.00 90.00 90.00 T xC9H24N2 (Al32Co32P54O258) 49- 625 C 13,5<sub>g</sub> 6.03 19.07 19.07 27.59 UCSB-6GaCo--SBS UCSB 6GaCo 90.00 90.00 120.00 H xC7H20N2+|Ga24Co24P48O192|

13.6<sub>x</sub>

13.4,

49- 626 C

15.43

17.84

17.84 27.18

Zeolite Structure Type Name—Code

					Z	olite	Struc	ture 1					Chaminal
				tronge			Param b	eters C	Cel a	l Angλ β	es Y	Crys	, Chemical Formula
Zeolite Name	PDF# Q	<u> </u>	Rei	lection		a						<u> </u>	
								B-10Ga		BT		_	O. H. M. (Dr. Zw. Pr. David
UCSB-10.GaZn	49- 617, C		14.7 <sub>x</sub>	14.08	12.53	18:08	18.08	41.95	90.00	90.00	120.00	R	xC10H26N2*[Ga36Zn30P72O228]
•						•	<u>s</u>	SZ-44-	-SFF	•			
SSZ-44	52- 115 C			11.0a	3.484	•	•	•				X	C <sub>11</sub> H <sub>22</sub> -Al <sub>2</sub> O <sub>2</sub> -N-Na-SiO <sub>2</sub> -H <sub>2</sub> O C <sub>11</sub> H <sub>22</sub> N-Al <sub>2</sub> O <sub>3</sub> -Na-SiO <sub>2</sub> -H <sub>2</sub> O
SSZ-44	52- 117 C	• •	4.63,	11.0 <sub>8</sub>	10.24		_					•	
						•	S	igma-2	-SGT			v	No Al SiOran and
ZSM-58	43- 40 C 40-1498 *		5.16 <sub>2</sub> 4.54 <sub>g</sub>	3.39 <sub>x</sub> 4.49 <sub>g</sub>	3.36 <sub>9</sub> , 2.76 <sub>g</sub>	10.24	10.24	34.38	90.00	90,00	90.00	X T	Nno.3A12.564Si100O203.996 SiO2
Zeolite Sigma-2 Zeolite Sigma-2	42- 26 C		4.49 <sub>x</sub>	4.54 <sub>x</sub>	3.344	10.24	10.24	34.38	90.00	90.00	90.00	т	Si64O128(C10H17N)4
							Se	odalite	-SOD	•			
A1PO4-20	43- 569 C	)	3.63 <sub>x</sub>	6.335	4.464					- 00 00	00.00	X	AIPO4 • 1.085H <sub>2</sub> O AIPO4
AlPO4-20	45- 509 6 50-1697 0		3.64 <sub>x</sub> 3.64 <sub>x</sub>	6.29 <sub>4</sub> 4.45 <sub>4</sub>	4.45 <sub>4</sub> 6.29 <sub>3</sub>	8.91 8.93	8.91 8.93	8.91 8.93	90.00 90.00	90.00 90.00	90.00	C	C4H12N-Nn2O-AlPO4-H2O
AlPO4-20 AlPO4-20 (Sodalite)	47- 597	)	6.19	$3.59_{6}$	4.37 <sub>3</sub> 6.32 <sub>3</sub>	8.98	8.98	8.98	90.00	80.00	90.00	X	AIPO <sub>4</sub> C <sub>4</sub> H <sub>12</sub> N-AIPO <sub>4</sub> -C <sub>03</sub> O <sub>4</sub> -H <sub>2</sub> O
CoAPO-20	50-1701 ( 50-1700 (		3.66 <sub>x</sub> 3.65 <sub>x</sub>	4.48 <sub>4</sub> 4.46 <sub>3</sub>	6.313	8.95	8.95	8.95	90,00	80.00	90.00	С	C4H12N-Nu2O-AlPO4-CuO-H2O
CuAPO-20 DPZ-7A	47- 246	i	3.60 <sub>x</sub>	$2.55_9$	2.799	8.82	8.82 9.03	8.82 9.03	90.00 90.00	90.00	90.00		N06Zn6(PO4)6+8H2O N06Zn6(AsO4)6+8H2O
DPZ-7B Danslite	47- 247 1 11- 491	۲	2,61 <sub>x</sub> 3.35 <sub>e</sub>	6.40 <u>.</u> 1.93 <sub>7</sub>	3.69 <sub>x</sub> 2.19 <sub>5</sub>	9.03 8.21	8.21	B.21	90.00	90.00	90.00	C	(Fe,Mn) <sub>4</sub> Bc <sub>3</sub> Si <sub>3</sub> O <sub>12</sub> S C <sub>2</sub> H <sub>4</sub> (OH) <sub>2</sub> +0.167SiO <sub>2</sub>
Ethylene glycol sodalite		k	3.60 <sub>x</sub>	6.248	4.426	8.83	8.83	8,83	90.00 90.00	90.00	90.00		Zn <sub>4</sub> Be <sub>3</sub> Si <sub>3</sub> O <sub>12</sub> S
Genthelvite Hauyne		k k	3.31 <sub>x</sub> 3.72 <sub>x</sub>	1.91 <sub>4</sub> 2.63 <sub>2</sub>	2.17 <sub>2</sub> 2.15 <sub>2</sub>	8.12 9.12	8.12 9.12	8.12 9.12	90.00	90.00	90.00	C	NneCanAleSicOne(SO4)2
Hauyne	50-1644 29-1221		3.72 <sub>x</sub> 8.72 <sub>x</sub>	2.62s 2.64g	2.14 <sub>7</sub> 2.15 <sub>3</sub>	9.08 9.12	9.08 9.12	9.08 9.12	90.00 90.00	90.00 80.00	90.00		Ko.26Na6.11Ca1.36Al5.66Si6.14O24[(SO4)1.63Clo.28] Na6Pb2Al6Si6O24(SO4)2
Hauyne-Pb Hydroxysodalite	11- 401		3.63 <sub>x</sub>	6.28 <sub>8</sub>	2.56 <sub>8</sub>	8.87	8.87	8.87	90.00	90.00	90.00		Na <sub>4</sub> Al <sub>3</sub> Si <sub>3</sub> O <sub>12</sub> (OH)
Lazurite	17- 749		3.71,	2.62a 2.62a	2.87 <sub>5</sub> 6.43 <sub>4</sub>	9.09 9.09	9.09 12.86	9.09 25.71	90.00 90.00	90.00	90.0		Na <sub>6</sub> Ca <sub>2</sub> Al <sub>5</sub> Si <sub>5</sub> O <sub>24</sub> (SO <sub>4</sub> ) <sub>2</sub> Na <sub>6</sub> Ca <sub>2</sub> Al <sub>5</sub> Si <sub>5</sub> O <sub>24</sub> (SO <sub>4</sub> ) <sub>2</sub>
Lazurita Lazurita	41-1393	i *	3.71 <sub>m</sub> 3.72 <sub>m</sub>	2.62	2.146	36.36	51.40	51.40	90.00	90.00 90.00	90.0		Na <sub>6</sub> Ca <sub>2</sub> Al <sub>6</sub> Si <sub>6</sub> O <sub>24</sub> (SO <sub>4</sub> ) Na <sub>6</sub> Ca <sub>2</sub> Al <sub>6</sub> Si <sub>6</sub> O <sub>24</sub> (SO <sub>4</sub> ) <sub>2</sub>
Lezurite MnAPO-20		i O	3.71 <sub>x</sub> 4.51 <sub>x</sub>	2.62a 3.697	2.14 <sub>5</sub> 2.62 <sub>2</sub>	9.07 9.00	9.07 9.00	9.07 9.00	90.00 90.00	90.00	90.0		C <sub>4</sub> H <sub>12</sub> N-Na <sub>2</sub> O-AlPO <sub>4</sub> -MnO-H <sub>2</sub> O
NiAPO-20		0	3.68 <sub>x</sub>	4.514	6.423	8.99	8.99	8.99	90.00	90.00	90.0 90.0		C4H12N-AIPO4-NiO-H2O NagAlgSigO24SO4
Nosean		i i	3.71 <sub>x</sub> 3.67 <sub>x</sub>	2.63 <sub>8</sub> 4.49 <sub>3</sub>	6.45 <sub>7</sub> 6.35 <sub>3</sub>	9.08 8,98	9.08 8.98	9.08 8.98	90.00 90.00	90.00 90.00		C	(AlayaSiayaPaya)Oa
SAPO-20 SAPO-20	47- 615	0	3.66 <sub>x</sub>	4.486	6.284	8.97	8.97	8.97	90.00	90.00	90.0	) C	Al <sub>0.47</sub> Si <sub>0.15</sub> P <sub>0.38</sub> O <sub>2</sub> *0,16C <sub>4</sub> H <sub>12</sub> N*0.12H <sub>2</sub> O Al <sub>0.47</sub> Si <sub>0.15</sub> P <sub>0.38</sub> O <sub>2</sub>
SAPO-20		i i	6.33 <sub>x</sub> 3.61 <sub>x</sub>	3.66 <sub>z</sub> 6.25 <sub>e</sub>	4.484 4.424	8.86	8.86	8.86	90.00	90.00		j c	(C <sub>2</sub> H <sub>7</sub> NOXSi <sub>5</sub> O <sub>12</sub> )
Silica sodalite Sodalite	37- 476	*	3.62,	6.284	2.092	8.88	8.88	8.88 9.10	90.00	90.00 90.00			No4Al3Si3O12Cl No7Al6Si6O24S3
Sodelite Sodelite		*	3.72 <sub>x</sub> 3.62 <sub>x</sub>	6.44 <sub>4</sub> 4.44 <sub>5</sub>	2.63 <sub>4</sub> 6.28 <sub>4</sub>	9.10 8.87	9.10 8.87	8.87	90.00	90.00	90.0	0 C	$(C_3H_6O_2)_2(Si_6O_{12})_2$
Sodalite	52- 145	i	3.70 <sub>x</sub>	6.415	2.61,	9.06	9.06	9.06	90.00	90.00			Na <sub>8</sub> Mg <sub>3</sub> Si <sub>9</sub> O <sub>24</sub> (OH) <sub>2</sub> Na <sub>8</sub> Mg <sub>3</sub> Si <sub>9</sub> O <sub>24</sub> (CLOH) <sub>2</sub>
Sodalite Sodalite (F)	62- 146 49- 937	i	3.67 <sub>x</sub> 6.35 <sub>x</sub>	6.36 <sub>5</sub> 3.67 <sub>9</sub>	2.12 <sub>3</sub> 2.12 <sub>4</sub>	9.00 8.99	9.00 8.99	9.00 8. <del>99</del>	90.00 90.00	90.00	90.0	D C	Nas[AlcSisOz4]2NaF •xH2O
Sodalite (Li,Cl,Be,As)	46- 560	C	3.68 <sub>x</sub>	3.36 <sub>9</sub> 5.68 <sub>6</sub>	5.82s 3.59s	8.24 8.03	8.24 8.03	8.24 8.03	90.00 90.00	90.00			Li4ClBe3As3O12 Li4ClBe3PsO12
Sodalite (Li,Cl,Be,P) Sodalite, (Ag)	46- 561 43- 238	Ç	3.65 <sub>x</sub>	2.83 <sub>x</sub>	2.11 <sub>x</sub>	8.96	8.96	8.96	90.00	90.00	90.0	0 C	Ags(A)sSisO24)=8H2O
Sodalite, (Ag)	49- 239		3.62 <sub>x</sub>	1.991	2.57 <sub>x</sub>	8.92 9.02	8.92 9.02	8.92 9.02	90.00 90.00	90.00			Agg Al <sub>6</sub> Si <sub>6</sub> O <sub>24</sub>  (OH) <sub>2</sub> +2H <sub>2</sub> O Ag <sub>5.77</sub>  Ga <sub>5.77</sub> Si <sub>6.23</sub> O <sub>24</sub>  +8H <sub>2</sub> O
Sodalite, (Ag,Ga) Sodalite, (B(OH)4)	43- 240 43- 250	i i	2.85 <sub>x</sub> 3.66 <sub>s</sub>	3.68 <sub>4</sub> 2.60 <sub>9</sub>	2.41, 2.12,	9,01	9.01	9.01	. 90,00	90.00	90.0	ю С	Nas[AlSiO4]6[B(OH)4]2
Sodnlite, (B(OH)4)	43- 251 37- 196	i	3.67 <sub>x</sub> 3.64 <sub>x</sub>	2.60 <sub>7</sub> 6.31 <sub>5</sub>	6.33 <sub>2</sub> 2.58 <sub>4</sub>	18.06 8.92	18.06 8.92	9.01 8.92	90.00 90.00				
Sodalite, (CN) Sodalite, (CO3)	24-1045		6.26 <sub>x</sub>	3.63,	2.589	17.71	17.71	17.71	90.00				
Sodalite, (Ga) Sodalite, (Ge)	43- 245 43- 141	Ċ	6.21 <sub>x</sub> 6.38 <sub>x</sub>	3.60 <sub>2</sub> 3.69 <sub>9</sub>	2.55 <sub>9</sub> 2.61 <sub>5</sub>	8.84 9.03	8.84 9.03	8.84 9.03	90.00 90.00	90.00	90.0	10 C	NagAlaGeaO24(OH)2
Sodalite, (Ge)	43- 241	*	2.62 <sub>*</sub> 2.61 <sub>*</sub>	6.42 <sub>9</sub> 2.86 <sub>9</sub>	1.61 <sub>8</sub> 1.36 <sub>9</sub>	9.08 9.03	9.0B 9.03	9.08 9.03	90.00 90.00				
Sodalite, (Ge)	43- 242 43- 248	i i	2.64 <sub>x</sub>	1.629	3.789	9.15	9.16		90.00	90.00	90.0		
Sodalite, (Gc,B(OH)4) Sodalite, (Ge,Br)	43- 138	Ç	3.71 <sub>s</sub>	2.433	4.07 <sub>2</sub> 3.71 <sub>9</sub>	9.09			90.00 90.00				
Sodalite, (Ge,Br) Sodalite, (Ge,Cl)	43- 248 43- 139	Ċ	2.43 <sub>x</sub> 3.69 <sub>x</sub>	1.61 <sub>x</sub> 6.40 <sub>s</sub>	2.613	9.04	9.04	9.04	90.00	90.0	90.		
Sodalita, (Ge,Cl)	43- 247	i	2.61 <sub>x</sub>	3.699	2.429	9.03 9.23			90.00 90.00				**
Sodalite, (Ge,ClO4) Sodalite, (Ge,I)	43- 244 43- 140	Ċ	3.77 <sub>x</sub> 3.75 <sub>x</sub>	2.92 <sub>7</sub> 2.45 <sub>3</sub>	1.52 <sub>7</sub> 4.59 <sub>2</sub>	9.18	9.18	9.18	90.00	90,0	90.	00 (	NasAlsGesO24I2
Sodalite, (Ge,I) Sodalite, (Ge,NO3)	43- 249 43- 243	* i	2.45 <sub>2</sub> 3.72 <sub>2</sub>	3.74 <sub>x</sub> 2.63 <sub>x</sub>	2,16 <sub>9</sub> 1.61 <sub>8</sub>	9.16 9.11			90.00 90.00	90.0	0 90.	00 (	NasiAlGeO4ls(NO3)2
Sodalite, (GeBr)	43-1487	ċ	3.71 <sub>x</sub>	2.433	6.433	9.09		9.09	90.00	90.0	0 90.		
Sodalite, (K,Cl)	41- 72 14- 17	0	3.75 <sub>x</sub> 3.64 <sub>z</sub>	2.17 <sub>5</sub> 6.33 <sub>8</sub>	2.89 <sub>3</sub> 2.58 <sub>6</sub>	8.98	8.93	8.93	90.00	90.0		00 (	(NH4)3Al3Si3O12Cl
Sodalite, (NH4) Sodalite, (NO2,CO3)	48- 443	i	$3.67_{x}$	6.36g	2.60	9.00	9.00	9.00 9.10	90.00 90.00				
Sodalite, (Na,ClO4) Sodalite, (Na,Zn,P)	44- 79 45- 122	Ċ	3.72 <sub>x</sub> 6.24 <sub>x</sub>		2.14 <sub>2</sub> 2.55 <sub>7</sub>	8.63		8.83	90.08		0 90.	00 (	Na <sub>6</sub> (ZnPO <sub>4</sub> ) <sub>6</sub> -8H <sub>2</sub> O
Sodalite, (NaNO3)	50- 248	*	3.67 <sub>x</sub>		2.593	8.98	8.98	8.98	90.00	90.0	0 90		C Nas[AlSiO4]s(NO2)2 K Na2RbAl3Cl(SiO4)3
Sodalite, (Rb,Cl) Sodalite, (Zn,As)	41- 73 45- 134	O	3.16 <sub>x</sub> 6.38 <sub>x</sub>			9.03	3 9.03	9.03	90.00	90.0	0 90	00 (	C Nas(ZnAsO <sub>4</sub> ) <sub>5</sub> · 8H <sub>2</sub> O
TASO-20	46- 865 46- 866	0	3.66 <sub>2</sub> 3.65 <sub>2</sub>	6.334								:	K ((CH <sub>2</sub> ) <sub>4</sub> N) <sub>2</sub> O-N <sub>82</sub> O-Al <sub>2</sub> O <sub>3</sub> -TiO <sub>2</sub> -SiO <sub>2</sub> -H <sub>2</sub> O K N <sub>82</sub> O-Al <sub>2</sub> O <sub>3</sub> -TiO <sub>2</sub> -SiO <sub>2</sub>
TASO-20 Unnamed zeolite	24- 893	o	3.65 <sub>x</sub>			8.8	8.88		90.00				Na <sub>4</sub> (Al,Ga) <sub>3</sub> Sl <sub>3</sub> O <sub>12</sub> (OH)
Unnamed zeolite	25- 797 25- 798	i	3.75 <sub>x</sub> 3.76 <sub>x</sub>	3.242	2.162	9.18 9.2			90.00 90.00			.00	C Na6Ca2Al3Ga3Si6O24(CrO4)2 C Na6Ca2Al2Ga4Si6O24(MoO4)2
Unnamed zeolite Unnamed zeolite	25- 799	ì	3.77,	2.31,	2.661	9.2	2 9.2	2 9.22	90.0	0 90.0	0 90		C Nn5Cc2Al2Gn4Si6O24(WO4)2 C Na6Ca2Al6Gn6O24(WO4)2
Unnamed zeolite	29-1184		3.81,			9.3: 9.1:			90.09 90.0				C NacCarAlaSiaOza(TcO4)2
Unnamed zeolita Unnamed zeolita	29-1186 31-1270	ò	3.72, 3.67,	6.36	2.595	8.9	8 8.9	8 8.98	90.0	0.00	00 90	.00	C 1.0Na <sub>2</sub> O+Al <sub>2</sub> O <sub>3</sub> +1.68SiO <sub>2</sub> +1.73H <sub>2</sub> O C 1.0BNa <sub>2</sub> O+Al <sub>2</sub> O <sub>3</sub> +1.68SiO <sub>2</sub> +1.8H <sub>2</sub> O
Unnamed zeolite Unnamed zeolite	31-1271 32-1031	Ŏ *	3.67, 3.68,	6.36		8.9 9.0			9D.0 9D.0	0 90.0	00 90	.00	C Na <sub>4</sub> Al <sub>3</sub> Si <sub>3</sub> O <sub>12</sub> I
Unnamed zeolite	32-1032	*	3.65	2.11	2.393	8.9	3 8.9	3 8.93	90.0	0 90.0			C Na <sub>4</sub> Al <sub>2</sub> Si <sub>3</sub> O <sub>12</sub> Br
Unnamed zeolite	33-1164 38- 21	*	3.65, 3.66,			8.9 8.9			90.0 90.0	0 90.	00 90	.00	C Ag4Al3Si3O12I C Nag(Al6Si6O24XNO2)2 • 3H2O
Unnamed zeolite Unnamed zeolite	38- 22	i	3.70	2.62	6.415	9.0 8.8	6 9.0	6 9.06	90.0 90.0	0 90.	00 90		C Na <sub>B</sub> Al <sub>6</sub> Si <sub>6</sub> O <sub>24</sub> (SCN) <sub>2</sub> *2H <sub>2</sub> O C Na <sub>B</sub> Ga <sub>10</sub> Si <sub>2</sub> O <sub>23</sub> *10H <sub>2</sub> O
Unnamed zeolite Unnamed zeolite	39. 100 40- 100	i	2.56 3.57		2.80 <sub>0</sub> 2.53 <sub>3</sub>	8.8 8.7			90.0			.00	C Nas(AlSiO <sub>4</sub> ) <sub>6</sub> (OH) <sub>2</sub>
Unnamed zeolita	40- 101	*	6.45	3.72	4 2.63 <sub>2</sub>	9.1			90.0			.00 .00	C Na <sub>6</sub> (A)SiO <sub>4</sub> ) <sub>8</sub> C Na <sub>6</sub> (A)SiO <sub>4</sub> ) <sub>6</sub> • 8H <sub>2</sub> O
Unnamed zeolite Unnamed zeolite	40- 102 41- 204	i	3.62 2.60			8.8 25.5	12.7	5 9.02	90.0 90.0	90.	00 90	.DO	O Nas(AlSiO4)6(B(OH)4)2
Unnamed zeolite Unnamed zeolite	41- 205 41- 635	i	2.60 3.62	3.69	2.13,	9.0 8.9			90.0 90.0			00.0 00.0	C Nas(AlSiO4)s(B(OH)4)2 T Nas(AlSiO4)s(OH)2*xH2O
Cinished Implies	*1- 030	•	3.02	g 0.01									

Ξ

Cell Parameters 3 Strongest Cell Angles Crys. Chemical Zeolite Name PDF# QM Reflections Sys. Formula В 3.71<sub>x</sub> 3.69<sub>x</sub> 3.63<sub>x</sub> 3.66<sub>x</sub> 6.41<sub>x</sub> 6.44<sub>6</sub> 6.38<sub>8</sub> 2.10<sub>8</sub> 2.83<sub>8</sub> 2.63<sub>8</sub> 90.00 90.00 90.00 90.00 90.00 90.00 90,00 90,00 90,00 90,00 C4H6Al6N86O26Si6 Na8[AISiO4]6CO3 Na8[AISiO4]6(OH)2\*2H2O N86[AISiO4]8\*4H2O Tinnemed reolite 42- 213 00000 42- 214 42- 215 42- 216 42- 217 2.61<sub>x</sub> 2.67<sub>9</sub> 2.59<sub>8</sub> 3.71<sub>x</sub> 9.03 8.89 8.97 named replife 9.03 9.03 Unnamed reolite
Unnamed reolite 8.89 8.97 9.10 90.00 Innumed zeolite 9.10 90.00 90.00 90.00 Nas[AlSiO4] 4.578 2.636 2.855 2.838 2.162 Aga[AlSiO<sub>4</sub>]<sub>5</sub>CrO<sub>4</sub> Aga[AlSiO<sub>4</sub>]<sub>5</sub>(ClO<sub>4</sub>)<sub>2</sub> Aga[AlSiO<sub>4</sub>]<sub>6</sub>(NO<sub>2</sub>)<sub>2</sub> Na<sub>6</sub>[AlGeO<sub>4</sub>]<sub>5</sub>•8H<sub>2</sub>O Na<sub>6</sub>Ca<sub>2</sub>[AlSiO<sub>4</sub>]<sub>6</sub>(WO<sub>4</sub>)<sub>2</sub> 3.23, 2.63<sub>x</sub> 3.22<sub>6</sub> 2.12<sub>7</sub> 6.33<sub>9</sub> 2.45<sub>2</sub> 9.12 90.00 90.00 90.00 90.00 90.00 90.00 90.00 90.00 90.00 90.00 90.00 90.00 90.00 Unnamed seclite 44- 306 9.12 9.12 8.12 00000 Unnamed zeolite
Unnamed zeolite
Unnamed zeolite 44- 307 44- 308 44- 309 44- 310 3.72<sub>x</sub> 3.67<sub>x</sub> 3.65<sub>x</sub> 3.76<sub>x</sub> 9.12 9.12 9.00 8.95 9.18 9.00 8.95 9.18 Innamed scolite 90.00 90.00 44- 311 44- 312 44- 313 44- 704 44- 705 Na<sub>5</sub>Cd<sub>3</sub>[AlSiO<sub>4</sub>]<sub>6</sub>(M<sub>5</sub>O<sub>4</sub>)<sub>2</sub> Na<sub>6</sub>Cd<sub>2</sub>[AlSiO<sub>4</sub>]<sub>6</sub>(WO<sub>4</sub>)<sub>3</sub> Pb<sub>4</sub>(AlSiO<sub>4</sub>]<sub>6</sub>(OH)<sub>2</sub>+5H<sub>2</sub>O [C<sub>2</sub>H<sub>6</sub>O<sub>2</sub>]<sub>2</sub>[Si<sub>12</sub>O<sub>24</sub>] [(H<sub>3</sub>C)<sub>4</sub>N][GaSi<sub>5</sub>O<sub>12</sub>] Unnamed zeolite Unnamed zeolite Unnamed zeolite Unnamed zeolite 3.72<sub>x</sub> 3.73<sub>x</sub> 3.71<sub>x</sub> 3.62<sub>x</sub> 3.65<sub>x</sub> 90.00 90.00 90.00 90.00 9.13 9.13 3.23 2.632 90.00 90.00 3.23<sub>2</sub> 2.88<sub>7</sub> 4.44<sub>5</sub> 6.33<sub>6</sub> 2.44<sub>2</sub> 2.14<sub>4</sub> 6.28<sub>4</sub> 4.47<sub>2</sub> 9.14 9.09 8.86 8.93 90.00 90.00 90.00 90.00 90.00 90.00 90.00 9.14 9.09 8.66 8.96 8.86 8.93 Unnamed zoolite 90.00 90.00 NagCa2AlcSiqO24(SO<sub>4</sub>)<sub>2</sub> Nag(AlSiO<sub>4</sub>)<sub>5</sub>(NO<sub>2</sub>)<sub>2</sub> NagAlcSi<sub>4</sub>O<sub>3</sub>(CO<sub>2</sub>)<sub>2</sub>b<sub>4</sub>(OH)\*3H<sub>2</sub>O NagAlcSi<sub>4</sub>O<sub>2</sub>\*(2E<sub>7</sub>O · Na<sub>2</sub>O\*Al<sub>2</sub>O<sub>2</sub>\*2.1SiO<sub>2</sub>\*xH<sub>2</sub>O 3.71<sub>x</sub> 3.65<sub>x</sub> 3.63<sub>x</sub> 9.44<sub>x</sub> 3.63<sub>x</sub> 2.87s 2.587 2.577 2.98s 2.56<sub>x</sub> 2.62<sub>6</sub> 6.33<sub>8</sub> 6.30<sub>8</sub> 2.84<sub>6</sub> 44-1396 47- 234 49- 757 39- 191 9.07 90.00 90.00 90.00 9.07 9.07 90.00 90.00 0000 Unnamed zeolite Unnamed zeolite Zeolite V 8.93 8.90 9.41 8.93 8.90 9.41 90.00 90.00 90.00 90.00 90.00 90.00 8.93 39- 191 16- 612 zoolite Zeolite Zh SSZ-35--STF 7.27<sub>2</sub> 4.47<sub>3</sub> 4.46<sub>3</sub> 11.0<sub>x</sub> 11.1<sub>x</sub> 11.0<sub>x</sub> 9.06<sub>2</sub> 4.61<sub>7</sub> 4.60<sub>5</sub> SiO<sub>2</sub> SiO<sub>2</sub> K<sub>z</sub>(Al<sub>2</sub>Si<sub>1-z</sub>)O<sub>2</sub>•H<sub>2</sub>O 61-137B 51-1593 88.84 111.17 111.17 90.70 A 95.19 105.71 A X FTQ-9 FSTZ-35, as-synthesized i 14.76 11.64 18.16 11.57 7.36 7.46 95.81 SSZ-35, as synthesized SSZ-35, as synthesized, alumino silicate SSZ-35, calcined 51-1595 51-1594 11.43 11.61 0 11.1, 4.561 7.39 94,97 96.03 104.97 A SiO<sub>2</sub> Stilbite STI 4.05<sub>x</sub> 4.06<sub>8</sub> 4.04<sub>x</sub> 3.99<sub>7</sub> 4.76<sub>7</sub> 29-1185 25- 124 24- 894 9.10<sub>x</sub> 9.03<sub>x</sub> 4.06<sub>x</sub> 8.75<sub>x</sub> 4.04<sub>x</sub> 3.03<sub>8</sub> 3.03<sub>8</sub> 9.11<sub>9</sub> 3.03<sub>6</sub> 2.97<sub>7</sub> 13.64 13.60 13.64 15.86 18.20 18.22 18.24 90.00 90.00 90.00 90.00 90.00 17.84 17.86 11.27 90.00 90.00 90.00 90.00 90.00 128.00 (Na,K,Ca)2(Si,Al)2O18 • 7H2O OO M M M Ce3ALSi14O36\*14H2O (Ca,Na)13(Si,Al)5O18\*8H2O Na0,332Ca1276CU3.40Al16Si25O72\*xNH3\*32H2O Na0,332Ca1276CU3.401Al16Si25O73\*32H2O Stilbite (Cn) 46-1082 19.90 18.24 11.98 90.00 132.16 90.00 128.07 11 26 tilbite, (Na,Ca,Cu) 45-125E 18.81 44-1479 4.069 3.035 13.64 18.25 11.27 90.00 127.94 Unnamed zeolite 9.14 90.00 M (Na,K)Ca2Al6Si12O36\*14H2O SSZ-23--STT 652-28 51-1377 9.42, 10,99 8,40a 13.12 21.77 13.70 90.00 102.51 90.00 M SiO<sub>2</sub> Terranovaite—TER 50-1714 61-1439 9.75 9.75 90.00 90.00 90.00 0 (Na4.2K0.2Mg0.2Ca3.7)(Al12.2Si67.7O160)+29H2O NaCaAl2Si17O40+H2O Thomsonite-THO 13.05 13.08 13.09 13.10 90.00 90.00 90.00 90.00 90.00 O 35- 498 46-1448 2.86<sub>x</sub> 4.62<sub>3</sub> 13.26 13.22 Theta-1--TON H-Al<sub>2</sub>O<sub>2</sub>-SiO<sub>2</sub>
C<sub>26.4</sub>H<sub>70.4</sub>M<sub>8.9</sub>\*0.15N<sub>82</sub>O\*Al<sub>2</sub>O<sub>3</sub>\*120SiO<sub>2</sub>\*8.6H<sub>2</sub>O
C<sub>37.6</sub>H<sub>70.4</sub>M<sub>8.8</sub>\*0.15N<sub>8</sub>O\*Al<sub>2</sub>O<sub>3</sub>\*126SiO<sub>2</sub>\*5.6H<sub>2</sub>O
C<sub>3</sub>H<sub>10.2</sub>N<sub>2</sub>N<sub>3</sub>O-Al<sub>3</sub>O<sub>3</sub>-SiO<sub>2</sub>H<sub>3</sub>O
C<sub>6</sub>H<sub>10</sub>N<sub>2</sub>+C<sub>57</sub>O-Al<sub>2</sub>O<sub>3</sub>-SiO<sub>2</sub>+H<sub>3</sub>O 4.33<sub>x</sub> 3.68<sub>9</sub> 3.67<sub>9</sub> 3.63<sub>7</sub> 3.63<sub>7</sub> 3.62<sub>7</sub> 13.72 17.16 5.02 90.00 90.00 90.00 3.64<sub>x</sub> 4.38<sub>x</sub> 4.36<sub>x</sub> 4.37<sub>x</sub> 4.38<sub>x</sub> XXX 39- 96 39- 97 39 98 39 99 3.68<sub>0</sub> 3 62 3.64 24SiO<sub>2</sub>•1.3(C<sub>2</sub>H<sub>5</sub>)<sub>2</sub>NH•0.9H<sub>2</sub>O 24SiO<sub>2</sub>•(C<sub>2</sub>H<sub>6</sub>)<sub>2</sub>NH•0.5H<sub>2</sub>O H-Al<sub>2</sub>O<sub>3</sub>-SiO<sub>2</sub> K<sub>0.70</sub>Al<sub>2</sub>Si<sub>126</sub>O<sub>255.35</sub> C<sub>2</sub>H<sub>2</sub>3N<sub>5</sub>-Na<sub>2</sub>O-K<sub>2</sub>O-SiO<sub>2</sub>-Al<sub>2</sub>O<sub>3</sub> Nt-10 Nt-10 Kh-10, (H) Np-10, (K,H) Nt-10, (K,Na) 44- 611 44- 612 38- 194 37- 356 39- 95 4.35<sub>x</sub> 4.35<sub>x</sub> 3.57<sub>x</sub> 3.65<sub>x</sub> 3.67<sub>x</sub> 3.62<sub>x</sub> 4.36<sub>x</sub> 3.63<sub>9</sub> 10.7<sub>8</sub> 10.8<sub>8</sub> 4.31<sub>8</sub> 17.40 17.40 90.00 90.00 90.00 90.00 90.00 OOXXX 3.67<sub>6</sub> 4.31<sub>6</sub> 10.8<sub>2</sub> 89- 94 49- 77 49- 82 49- 83 49- 84 O<sub>8</sub>H<sub>22</sub>N<sub>5</sub>-Na<sub>2</sub>O-Al<sub>2</sub>O<sub>3</sub>-SiO<sub>2</sub> 24SiO<sub>2</sub>•1.82ICl 24SiO<sub>2</sub>•1.35IBr 24SiO<sub>2</sub>•1.18I<sub>3</sub> 24SiO<sub>2</sub>•1.5Br<sub>2</sub> 3.54<sub>x</sub> 4.36<sub>x</sub> 3.66<sub>x</sub> 3.66<sub>x</sub> 3.66<sub>x</sub> 4.35<sub>2</sub> 8.67<sub>2</sub> 4.36<sub>7</sub> 3.61<sub>7</sub> 4.35<sub>9</sub> 3.607 3.618 4.357 4.357 3.617 No-10, (Na) Linamed zeolite Linamed zeolite Linamed zeolite Linamed zeolite 13.84 13.84 13.85 17.40 17.40 17.38 17.40 5.03 5.03 5.03 5.03 90.00 90.00 90.00 90.00 90.00 90.00 90.00 90.00 90.00 90.00 90.00 44- 119 50-1675 46- 569 37- 412 38- 197 4.36<sub>x</sub> 4.37<sub>x</sub> 10.8<sub>x</sub> 4.35<sub>x</sub> 4.36<sub>x</sub> 3.60<sub>x</sub> 10.9<sub>7</sub> 3.67<sub>8</sub> 10.8<sub>8</sub> 10.9<sub>6</sub> ZNM-22 3.67<sub>x</sub> 3.68<sub>8</sub> 4.36<sub>6</sub> 3.66<sub>9</sub> 3.68<sub>7</sub> 4.8(C7H10BrN) • 1.8Na2O • Al2O3 • 2358iO2 ò ZSM-22 ZSM-22 (Si) Zeolite KZ-2 Zeolite Theta-1 K-AlsSigoOts3-x (C2Hs)2NHSi24O48 1.56SiO2\*0.00716Al2O3\*0.00807Na2O 17.48 17.42 o 90.00 17.42 90.00 13.84 90.00 5.04 SiO<sub>2</sub> Zeolite Theta-1 43- 23 43- 320 4.37<sub>2</sub> 11.0<sub>x</sub> 10.9<sub>x</sub> 3.68<sub>2</sub> 4.38<sub>7</sub> 4.36<sub>8</sub> Al<sub>2</sub>Si<sub>70</sub>O<sub>143</sub> • H<sub>2</sub>O Na<sub>2</sub>O-Ga<sub>2</sub>O<sub>3</sub>-SiO<sub>2</sub>-H<sub>2</sub>O 000 3.62<sub>7</sub> 3.69<sub>8</sub> Zbolite Theta-1, (Ga) Zeolite Theta-1, (Na,H) Na<sub>2</sub>O-Al<sub>2</sub>O<sub>2</sub>-SiO<sub>2</sub>-H<sub>2</sub>O  $Tsch\"{o}rtnerite-TSC$ I schörtnerite 50-1611 C 18.3, 15.82 9.141 31.62 31.62 31.62 90.00 90.00 90.00 C Ca4(K,Ca,Ba,Sr)3Cu3(Al12Si12O4B)(OH)10\*20H2O VPI-5-VFI AIPO4-54 AIPO4-H1 MCM-9 MCM-9 42- 28 48- 33 42- 427 46- 646 16- 274 16.1<sub>x</sub> 16.5<sub>x</sub> 16.4<sub>x</sub> 16.5<sub>x</sub> 16.5<sub>x</sub> 8.03<sub>1</sub> 8.23<sub>2</sub> 4.21<sub>8</sub> 3.95<sub>7</sub> 3.93<sub>4</sub> Al<sub>18</sub>P<sub>18</sub>O<sub>72</sub> AlPO<sub>4</sub> \* 2.14H<sub>2</sub>O C<sub>6</sub>H<sub>16</sub>N-Al<sub>2</sub>O<sub>7</sub>-SiO<sub>7</sub>-P<sub>2</sub>O<sub>5</sub>-H<sub>2</sub>O Al<sub>2</sub>O<sub>3</sub>-SiO<sub>7</sub>-P<sub>2</sub>O<sub>6</sub>-C<sub>18</sub>H<sub>29</sub>NO-H<sub>2</sub>O AlPO<sub>4</sub> \* xH<sub>2</sub>O 4.20<sub>1</sub> 4.12<sub>2</sub> 8.20<sub>6</sub> 5.68<sub>6</sub> 3.28<sub>4</sub> 18.55 18.56 18.98 90.00 90.00 90.00 120.00 н nnamed reolite 44- 503 45- 176 45- 476 46- 171 46- 651 AIPO4\*XH<sub>2</sub>O AIPO4\*2.33H<sub>2</sub>O AIPO4 Al<sub>2</sub>O<sub>3</sub>\*P<sub>2</sub>O<sub>4</sub> Al<sub>2</sub>O<sub>3</sub>\*P<sub>2</sub>O<sub>4</sub> 4.06<sub>2</sub> 8.22<sub>1</sub> 4.06<sub>2</sub> 8.23<sub>5</sub> 4.06<sub>2</sub> 16.4<sub>x</sub> 16.4<sub>x</sub> 16.5<sub>x</sub> 16.5<sub>x</sub> 16.4<sub>x</sub> 4.08<sub>2</sub> 8.93<sub>1</sub> 3.28<sub>2</sub> 6.17<sub>8</sub> 4.08<sub>2</sub> 18.99 18.98 18.99 18.99 18.98 18.99 90.00 90.00 120.00 H iC\*00 120 00 VPI-7-VSV С 90.00 90.00 0 Na28.6H3.5Z016Si56O144-40H2O 46- 568 6.37<sub>x</sub> 3.254 39.88 10.32 10.22 3.143 Wenkite—WEN 90.00 120.00 H CasBa4AlaSi11O41(OH)2(SO4)3-H2O 90.00 nkita 19-1418 2.69<sub>0</sub> 7,46 3.46 3.88 18.51 13.51 Yugawaralite—YUG (Ba,Li)•Al•SiO4•H<sub>2</sub>O Ca(Si<sub>6</sub>Al<sub>2</sub>)O<sub>16</sub>•4H<sub>2</sub>O Sr-Al-Si-O-H<sub>2</sub>O 30- 741 39-1372 17- 756 4.24<sub>z</sub> 4.67<sub>x</sub> 5.88<sub>z</sub> 8.03<sub>z</sub> 2.71<sub>x</sub> 3.05<sub>9</sub> 4.76<sub>x</sub> 5.85<sub>x</sub> 90.00 111.20 90.00 M ed zeolite Ligawaralite Prolite Q. (Sr) Colite Q. (Sr) 14.01 10.06 \* 6.73 90.00 111,70 90.00 M Sr-Al-Si-O-H<sub>2</sub>O SrAl<sub>2</sub>Si<sub>5</sub>O<sub>16</sub>•4H<sub>2</sub>O 13.48 13.86 10.10

Zeolite Structure Type Name—Code

U

Zeolite Structure Type Name—Code Cell Angles Crys. Chemical Cell Parameters 3 Strongest Sys. Formula b β α Zeolite Name PDF# QM Reflections ZAPO-M1-ZON 90.00 90.00 90.00 O Al<sub>32</sub>P<sub>12</sub>O<sub>125</sub>(C<sub>4</sub>NH<sub>12</sub>F) 14.53 15.33 16.60 49-631 O 8.30 4.236 6.575 Refined structure, No IZA code—ZZ1 AlPO<sub>4</sub>
NH<sub>4</sub>Al<sub>2</sub>P<sub>2</sub>O<sub>8</sub>(OH)\*2H<sub>2</sub>O
Al<sub>2</sub>O<sub>3</sub>\*1.03P<sub>2</sub>O<sub>5</sub>\*0.44H<sub>2</sub>O\*0.46C<sub>6</sub>H<sub>12</sub>N<sub>2</sub>
C<sub>2</sub>TNSi<sub>2</sub>O<sub>15</sub>
C<sub>4</sub>H<sub>12</sub>N<sub>2</sub>O<sub>13</sub>Si<sub>6</sub> 8.72 9.56 90.00 90.00 90.00 6.98<sub>9</sub> 6.69<sub>7</sub> 3.47<sub>8</sub> 3.11<sub>7</sub> 12.4, 5.92, 4.23, 3.98 24.08 9.62 14.41 9.57 AlPO4-14A AlPO4-15 AlPO4-9 i 0000 90.00 M X M M 45- 183 43- 562 50- 58 90.00 90.00 7.42 4.90 80.00 107.71 13.39 .13.57 15.13 50- 5B 46- 567 3.37, 11.2<sub>e</sub> 3.65<sub>6</sub> 4.26<sub>g</sub> Cesium silicotitunate 22.46 90.00 91.67 3.94 Ga<sub>3</sub>P<sub>2</sub>O<sub>12</sub>(CH<sub>3</sub>NH<sub>2</sub>)<sub>2</sub>\*H<sub>2</sub>O Ga<sub>3</sub>P<sub>3</sub>O<sub>12</sub>(CH<sub>3</sub>NH<sub>2</sub>)\*H<sub>2</sub>O H<sub>2</sub>Si<sub>22</sub>O<sub>4</sub>\*xH<sub>2</sub>O H<sub>2</sub>Si<sub>22</sub>O<sub>4</sub>\*xH<sub>2</sub>O Na<sub>2</sub>Si<sub>14</sub>O<sub>22</sub>\*10H<sub>2</sub>O EU-19 6.067 4.63a 3.21a 3.39a 15.5a 9.73 14.11 8.80 16.93 90.00 90,00 90.00 90.00 90.00 00 8.14<sub>x</sub> 3.66<sub>x</sub> 19.7<sub>x</sub> 17.9<sub>x</sub> 3.60<sub>7</sub> 8.46<sub>x</sub> 3.44<sub>8</sub> 8.89<sub>6</sub> 16.28 GaPO4-M1 GaPO4-M2 Kenyaite, (H) 51- 240 51- 241 90.00 10.25 37- 385 X M 37- 886 42-1350 Kenyaite, (H) Magadiite 90.00 7.28 15.71 90.00 96.40 3.15, 7.30 NASSINOSS - 5.6H20 AIPO, \* 2H20 GaziP3201m(OH)16F8(C9H21N2)k=12H20 NaSAJSE(S-2H20 FeB-Q02H10 7.42 9.51 16.38 16.46 9.04 90.00 90.00 90.00 94.00 90.40 90.00 90.00 13.2<sub>8</sub>
2.71<sub>x</sub>
3.86<sub>4</sub>
3.41<sub>g</sub>
8.02<sub>9</sub> 7.34<sub>6</sub> 4.55<sub>8</sub> 5.79<sub>4</sub> 4.42<sub>g</sub> 2.96<sub>6</sub> 7.11 5.18 16.38 90.00 29- 668 33- 32 51- 80 3.41<sub>x</sub> 4.76<sub>x</sub> 8.19<sub>x</sub> 8.28<sub>g</sub> 3.11<sub>x</sub> Magadiita, (H) 8.45 Metavariscite COM 16.38 č 15.00 17.49 Mn-2 90.00 90.00 44- 50 45- 121 Unnamed zeolite 9.35 86.23 č Peg. 4022110 NaFe3P3O12 Na<sub>1.8</sub>Mg<sub>0.9</sub>Si<sub>1.1</sub>O<sub>4</sub> Na<sub>1.74</sub>Mg<sub>0.19</sub>Al<sub>0.16</sub>Si<sub>1.06</sub>O<sub>4</sub> Na<sub>2</sub>MgSiO<sub>4</sub> (C<sub>9</sub>H<sub>22</sub>N<sub>2</sub>)<sub>4</sub>Si<sub>40</sub>O<sub>72</sub>\*8H<sub>2</sub>O Unnamed zealite 90.00 90.00 90.00 114.18 90.00 90.00 90.00 90.00 90.00 90.00 90.00 3.11<sub>0</sub> 4.26<sub>8</sub> 4.24<sub>8</sub> 2.97<sub>9</sub> 3.58<sub>4</sub> 2.73<sub>9</sub> 2.96<sub>6</sub> 2.58<sub>5</sub> 2.58<sub>7</sub> 3.51<sub>3</sub> 6.50 7.11 M T 12.33 6.16<sub>2</sub> 2.67<sub>2</sub> 2.62<sub>2</sub> 12.00 45- 126 47-1497 Unnamed zeolite Unnamed zeolite Unnamed zeolite 5.33 10.60 10.82 26.25 5.33 000 14.40 5.28 14.05 5.25 47-1498 7,08 7.43 90,00 2.64<sub>x</sub> 13.1<sub>x</sub> 47-1499 Unnamed zee 90.00 90.00 90.00 52- 140 Unnamed zeolite 90,00 90,00 90,00 90.00 90.00 90.00 AlPO. 2H2O 0 0 H 90.00 4.29<sub>x</sub> 3.04<sub>x</sub> 3.79<sub>x</sub> 3.91<sub>x</sub> 11.6<sub>x</sub> 9.66 8.56 17.18 5.39<sub>6</sub> 4.26<sub>7</sub> 3.15<sub>9</sub> 4.20<sub>8</sub> 4.20<sub>8</sub> 4.83<sub>6</sub> 5.36<sub>7</sub> 2.91<sub>8</sub> 11.9<sub>1</sub> 3.88<sub>5</sub> 9.90 25- 18 33- 33 AIPO4\*2H2O K<sub>0.60</sub>Na<sub>0.90</sub>\*0.5(C<sub>4</sub>H<sub>12</sub>N)O\*Al<sub>2</sub>O<sub>3</sub>\*10.4SiO<sub>2</sub>\*13.4H<sub>2</sub>O 100SiO<sub>2</sub>\*0.35Na<sub>2</sub>O\*0.085Al<sub>2</sub>O<sub>3</sub>\*5.9C<sub>6</sub>H<sub>19</sub>N Variscite 9.82 9.62 7.59 120.00 Veriscite ZSM-34 18.20 18.20 48- 661 O 43. F31 ò SiO<sub>2</sub> 90.00 90.00 ZSM-48 14.24 20.14 8.40 90.00 7SM-48 Na<sub>2</sub>Al<sub>2</sub>Si<sub>2.72</sub>O<sub>9.42</sub>•4.39H<sub>2</sub>O 90.00 С 18.98 18.98 18.98 90,00 90.00 2.85 4.232 Zeolite Upsilon ZZ4 Proposed topology NapAlpSia, 10,17,4 × C4H; NO3 \* 2H2O 0.04(CpH<sub>10</sub>NO<sub>2</sub>)<sub>2</sub>O \* 0.96Na<sub>2</sub>O \* Al<sub>2</sub>O<sub>3</sub> \* 6.7SiO<sub>2</sub> (CpH<sub>20</sub>NO<sub>2</sub>)<sub>2</sub>O-Na<sub>2</sub>O \* Al<sub>2</sub>O<sub>3</sub> \* 6.7SiO<sub>2</sub> (Na, K, Ca)<sub>2</sub>Al<sub>2</sub>SiO<sub>2</sub>(SO<sub>4</sub>)<sub>2</sub>Clo<sub>2</sub>s NaSi<sub>23</sub>O<sub>60.5</sub> \* 2H<sub>2</sub>O 90.00 90.00 90.00 120.00 90.00 7.31 7.39 7.30 90.00 90.00 90.00 90.00 90.00 5.76<sub>5</sub>
3.49<sub>4</sub>
3.25<sub>5</sub>
8.13<sub>7</sub>
3.96<sub>6</sub> 000H0 46- 652 46- 867 46- 868 3.17<sub>x</sub> 3.17<sub>x</sub> 3.50<sub>x</sub> 3.25<sub>6</sub> 5.71<sub>9</sub> 3.17<sub>8</sub> 26.81 18.13 18.30 12.85 18.15 26.16 90.00 90.00 90.00 90.00 ECR-1 ECR-1 ECR-1 i 26 30 12.85 11.95 42.22 35- 479 49- 678 3.71<sub>x</sub> 14.4<sub>x</sub> 3.45<sub>8</sub> 4.18<sub>8</sub> Giuseppettite Si-NCL-1 i Na<sub>30,42</sub>Si<sub>250</sub>VO<sub>500</sub> • xH<sub>2</sub>O 3.98<sub>7</sub> 3.86<sub>6</sub> 11.4<sub>6</sub> 10.7<sub>5</sub> 49- 674 52- 142 49- 927 14.4<sub>x</sub> 15.9<sub>x</sub> 4.37<sub>x</sub> 11.2<sub>x</sub> 4.209 2.896 4.027 4.336 X H X X 0 \* 0 0 Al<sub>24</sub>Si<sub>84</sub>O<sub>204</sub> Na<sub>2</sub>Al<sub>2</sub>Si<sub>80</sub>O<sub>124</sub>-H<sub>2</sub>O-C<sub>12</sub>H<sub>20</sub>N Na<sub>2</sub>Al<sub>2</sub>Si<sub>85</sub>O<sub>194</sub> V-NCI-1 90.00 90.00 120.00 81.58 31.58 7.53 Zcolite SSZ-37 Unknown structure—ZZ9 KnO-Na-O-Al-O-SiO-HaO X X C M 3.067 6.244 4.158 3.875 3.91<sub>8</sub> 2.98<sub>7</sub> 3.10<sub>6</sub> 43- 48 43- 50 43- 49 42- 102 42- 103 15.9<sub>x</sub> 9.36<sub>x</sub> 16.0<sub>x</sub> 7.73<sub>x</sub> 10.3<sub>x</sub> K<sub>2</sub>O-Na<sub>2</sub>O-Al<sub>2</sub>O<sub>3</sub>-SiO<sub>2</sub>-H<sub>2</sub>O K<sub>2</sub>O-Na<sub>2</sub>O-Al<sub>2</sub>O<sub>3</sub>-SiO<sub>2</sub>-H<sub>2</sub>O AlAsO<sub>4</sub>=0.2(C<sub>3</sub>H<sub>10</sub>N<sub>2</sub>)=0.4H<sub>2</sub>O AlAsO<sub>4</sub>=0.3(C<sub>3</sub>H<sub>10</sub>N<sub>2</sub>)=0.2H<sub>2</sub>O AG4 AG6 AGS 0001 90.00 90.00 90.00 127.58 7.72 19.25 7.72 12.01 7.72 10.36 90.00 4.478 AlAsO4-3 4.110 ALAsO4-4 5.98 10.60 20.43 94.85 96.88 90.00 90.00 90.00 90.00 M 3.16<sub>2</sub> 3.30<sub>2</sub> 3.04<sub>4</sub> 3.83<sub>7</sub> 8.38<sub>7</sub> 90.00 90.00 18.96 9.48<sub>x</sub> 9.90<sub>x</sub> 7.24<sub>x</sub> 4.17<sub>x</sub> 10.8<sub>x</sub> 8.41<sub>5</sub> 7.68<sub>2</sub> 4.06<sub>8</sub> 2.78<sub>7</sub> 3.87<sub>7</sub> 11.78 46- 890 47- 789 AlasO4-5 11000 6.64 AlasO4-6 AlasO4-D 41- 563 48- 573 47- 610 AIPO4-23 AIPO4-26 AlPO4 X 7.26<sub>2</sub> 3.92<sub>1</sub> 12.8<sub>2</sub> 6.71<sub>2</sub> 6.71<sub>3</sub> 4.77s 3.69s 5.67s 47- 611 48- 35 50-1680 11.24 A1PO4-28 00:00 AIPO. 4.91z 4.81z 5.54z 4.29s Alfo, C<sub>24</sub>H<sub>60</sub>N<sub>4</sub> • 12AlPO<sub>4</sub> • H<sub>2</sub>O C<sub>44</sub>H<sub>12.85</sub>Al<sub>2</sub>N<sub>1.15</sub>O<sub>8.05</sub>P<sub>1.9</sub> • 0.22H<sub>2</sub>O Al<sub>2</sub>O<sub>2</sub> • 0.95P<sub>2</sub>O<sub>5</sub> AIPO4-23 AIPO4-H4 CAM-1 CFAP-7A CFAP-7B M 90.00 104.63 90.00 8.52 82.09 14.24 6 7 6.92<sub>0</sub> AgO<sub>2</sub>\*0.95P<sub>2</sub>O<sub>3</sub> 1.1CH<sub>3</sub>NH<sub>3</sub>\*Al<sub>2</sub>O<sub>3</sub>\*0.99P<sub>2</sub>O<sub>5</sub>\*0.32SiO<sub>2</sub>\*1.27H<sub>2</sub>O Al<sub>2</sub>O<sub>3</sub>\*0.99P<sub>2</sub>O<sub>4</sub>\*0.32SiO<sub>2</sub> Al<sub>2</sub>O<sub>3</sub>\*0.99P<sub>2</sub>O<sub>4</sub>\*0.32SiO<sub>2</sub> C<sub>2</sub>H<sub>12</sub>O<sub>4</sub>-Na<sub>2</sub>SO<sub>4</sub>-Na<sub>2</sub>O-SiO<sub>2</sub>-Al<sub>2</sub>O<sub>3</sub>-CH<sub>3</sub>OH 42-4.29<sub>9</sub> 3.72<sub>8</sub> 3.26<sub>9</sub> 5.31<sub>9</sub> 4.37<sub>x</sub> 42- 8 41- 113 41- 114 41- 115 48- 161 6.28<sub>x</sub> 8.67<sub>x</sub> 8.95<sub>x</sub> 4.61<sub>x</sub> 10.9<sub>x</sub> 4.15<sub>9</sub> 8.51<sub>0</sub> 00000 CFAP-7B CFSAPO-1(A) CFSAPO-1(B) CFSAPO-1(C) CT-5 4 42 3.476 CSiO<sub>2</sub>), CaAl<sub>2</sub>Si<sub>3</sub>O<sub>10</sub>\*6H<sub>2</sub>O No<sub>1.6</sub>Go<sub>2</sub>Sic<sub>2</sub>SO<sub>16.8</sub>\*xC<sub>6</sub>H<sub>18</sub>INO<sub>2</sub> (C<sub>6</sub>H<sub>20</sub>N)<sub>0.8</sub>K<sub>1.16</sub>No<sub>0.27</sub>Al<sub>0.06</sub>Go<sub>1.27</sub>Si<sub>5.37</sub>O<sub>16.84</sub>\*xH<sub>7</sub>O "- 1.5.1.0... 90.00 90.00 9.72<sub>6</sub> 7.64<sub>2</sub> 3.81<sub>x</sub> 42- 5 46-1405 47- 236 51- 168 48- 733 9.91 23.27 20.68 30.62 90.00 99.70 90.00 4.413 10.2<sub>x</sub> 15.2<sub>x</sub> Clathrasil 90.00 2.94<sub>1</sub> 2.92<sub>8</sub> Cowlesite 9.11<sub>x</sub> 18.1<sub>x</sub> 3.35<sub>x</sub> ECR-15 ECR-34 EU-12 90.00 120.00 90.00 90.00 10.57 7.78a 4.20s 8.61 14.83 20.99 20.69 Na<sub>2</sub>Al<sub>2</sub>Si<sub>5</sub>O<sub>14</sub> Al<sub>2</sub>Si<sub>24</sub>O<sub>51</sub> N<sub>B2,12</sub>Al<sub>2</sub>Si<sub>2</sub>O<sub>5,05</sub> Al<sub>10</sub>Si<sub>24</sub>P<sub>73</sub>O<sub>385</sub> • 2.7C<sub>6</sub>H<sub>15</sub>N • xH<sub>2</sub>O [(C<sub>2</sub>H<sub>7</sub>)<sub>4</sub>N]<sub>2x</sub>Fe<sub>2-x</sub>PO<sub>4</sub> • zH<sub>2</sub>O XXXX 46- 748 47- 716 46- 645 43- 88 49-1711 6.85<sub>6</sub> 3.03<sub>8</sub> 4.28<sub>8</sub> 9.216 3.40<sub>x</sub> 12.1<sub>x</sub> H-Fu1 LZ-200 MCM-1 00000 4.603 6.576 2.828 6.95<sub>x</sub> 9.83<sub>x</sub> 42.3<sub>x</sub> 2.74 MCM-21 SiO<sub>2</sub> 21.3 MCM-41 SiO<sub>2</sub>
SiO<sub>2</sub>
CaAl<sub>2</sub>Si<sub>7</sub>O<sub>18</sub> \*3.5H<sub>2</sub>O
(C<sub>10</sub>H<sub>10</sub>Co)<sub>7</sub>(Ga<sub>4</sub>P<sub>4</sub>O<sub>12</sub>F(OH)<sub>6</sub>)
C<sub>16</sub>H<sub>50</sub>Al<sub>6</sub>N<sub>4</sub>O<sub>40</sub>P<sub>10</sub>\*2.5H<sub>2</sub>O 24.0<sub>1</sub> 35.9<sub>2</sub> 5.22<sub>2</sub> 20.8<sub>1</sub> 21.6<sub>1</sub> 8.79<sub>8</sub> 6.61<sub>6</sub> XCOTA 41.2<sub>x</sub> 41,9<sub>x</sub> 7.85<sub>x</sub> 9.35<sub>x</sub> 17.3<sub>x</sub> 49-1712 MCM-41 MCM-48 90.00 90.00 100.90 100.90 7.60 17.60 13.22 18.22 90.00 90.00 90.00 100.90 90.00 61-1691 24- 765 51-1422 51-2111 15.70 7.45 90.00 Metaheulandite 90.00 4.18<sub>9</sub> 8.57<sub>6</sub>  $\begin{array}{l} C_{11,0}H_{00}, Al_{2}N_{14,0}O_{10,0}Si_{10}*10.4H_{2}O\\ NahlSiO(*_{2}H_{2}O\\ Nah_{15}C(*_{2}H_{2}N)_{2}Ah_{3}i_{14,0}O_{97}*1.9(C_{2}H_{12}N)_{2}O*4.1H_{2}O\\ Nah_{15}(C_{4}H_{12}N)_{2}Ah_{3}i_{14,0}O_{97}*1.9(C_{4}H_{12}N)_{2}O*4.1H_{2}O\\ (Na_{10}C_{4}H_{10}N)_{10}Nah_{10}O_{10}SiSi*14.5H_{2}O\\ (Na_{2}O)_{1,0}Al_{2}O_{3}(SiO_{2})6**xH_{2}O\\ \end{array}$ 3.35 8.19a 4.46a 3.91a 3.38a 4.19x 3.97<sub>8</sub> 5.60<sub>6</sub> 6.26<sub>7</sub> 13.4<sub>9</sub> 4.10<sub>x</sub> 4.03<sub>x</sub> 2.83<sub>x</sub> 4.05<sub>x</sub> 35-1501 Na-1 Nepheline hydrate III 12- 247 47- 595 42- 358 42- 359 000 X 4.00, Nu-6(1) Nu-6(2) 90.00 120.00 90.00 90.00 90.00 90.00 CasAlr(SiO4)s(PO4)4(OH)5 • 16.5H2O н 2.88<sub>x</sub> 6.98<sub>x</sub> 3.46<sub>x</sub> 4.27<sub>x</sub> 3.42<sub>x</sub> 5.80<sub>7</sub> 3.48<sub>x</sub> 3.10<sub>x</sub> 1.34<sub>4</sub> 19.8<sub>9</sub> 6.08<sub>5</sub> 3.07<sub>1</sub> 3.06<sub>2</sub> 7.02 7.02 20.18 13.10 29- 284 Perhamite Phase N Phase O K<sub>2.7</sub>Al<sub>2</sub>Si<sub>2.54</sub>O<sub>5</sub>Cl<sub>0.7</sub>\*0.55H<sub>2</sub>O K<sub>2.72</sub>Al<sub>2</sub>Br<sub>0.72</sub>Si<sub>2.53</sub>O<sub>9</sub>\*0.43H<sub>2</sub>O SiO<sub>2</sub> SiO<sub>2</sub> 9.83 9.80 9.83 9.80 90.00 23-1818 90.00 27-1335 6.30<sub>3</sub> 717 Phase X1 19.40 90.00 90.00 90.00 19.40 14.50 31-1234 n SiO<sub>2</sub> (C<sub>8</sub>H<sub>16</sub>N)<sub>2</sub>SiO<sub>2</sub> AIPO<sub>4</sub>•0.28C<sub>10</sub>H<sub>8</sub>N<sub>2</sub> C<sub>1.22</sub>H<sub>3.63</sub>AIN<sub>0.44</sub>O<sub>4</sub>P C<sub>9</sub>H<sub>16</sub>N·Al<sub>2</sub>O<sub>2</sub>-SiO<sub>2</sub>-Na<sub>2</sub>O·H<sub>2</sub>O 3.15<sub>9</sub> 3.42<sub>4</sub> 4.18<sub>8</sub> 3.41<sub>6</sub> 3.75<sub>7</sub> 15.5<sub>x</sub> 4.33<sub>x</sub> 3.65<sub>x</sub> 17.6<sub>x</sub> 3.93<sub>x</sub> 3.44<sub>0</sub> 9.72<sub>9</sub> 7.10<sub>8</sub> 8.44<sub>9</sub> 4.93<sub>6</sub> 90.00 90.00 90.00 X 6.60 31-1233 50-1696 47- 409 15.50 16,50 00000 Phase Y RUB-4 SCS-14 SCS-24 SSZ-19 50- 73 47- 765 Zn<sub>0.2</sub>Al<sub>0.8</sub>PO<sub>4</sub> K-Na-Al-Si-O-(C<sub>2</sub>H<sub>5</sub>)<sub>4</sub>NOH-C<sub>7</sub>H<sub>13</sub>N H<sub>9.6</sub>Al<sub>2</sub>Siss.9O<sub>75.6</sub> K<sub>0.2</sub>Na<sub>2</sub>Al<sub>2</sub>Si<sub>7.4</sub>O<sub>18.9</sub>

13.4<sub>3</sub> 11.4<sub>5</sub> 3.78<sub>8</sub>

13.22 13.22

36.15. 36.15

7.54

4.11<sub>4</sub> 9.43<sub>8</sub> 9.46<sub>9</sub> 3.55<sub>8</sub>

51-1755 47- 407 47- 408 51- 449 52- 280

SUZ-2

11.5, 3.79, 11.4, 15.7, 15.7,

90.00 120.00

90.00 90.00 120.00

90.00

	·					. 2	Zeolite	Stru	cture	Type N	ame-	—Cod	le		•
	Zeolite Name	PDF# (	ΩМ		Strong eflectio		Cell a	Paran b	neters C	. Ce α	II Ang β			Chemical Formula	
3	Sacrafanite SiCo-9 Silhydrite	47-1741 42- 495 25-1332	ŏ	3.72 <sub>x</sub> 10.8 <sub>x</sub> 14.6 <sub>x</sub>	2.67 9.72 <sub>7</sub> 3.42 <sub>8</sub>	3.30 <sub>6</sub> 3.80 <sub>5</sub> 3.14 <sub>4</sub>	12.69 14.52	12.89 18.80	74.21	90.00	90.00 90.00	120.00 90.00	H.	(Na,Ca,K) <sub>8</sub> (Si,Al) <sub>12</sub> O <sub>24</sub> (SO <sub>4</sub> ,Cl,F) <sub>5</sub> •xH <sub>2</sub> O C <sub>36</sub> H <sub>84</sub> N <sub>3</sub> O <sub>2</sub> •26H <sub>2</sub> O •C <sub>9</sub> O •80SiO <sub>2</sub> •xH <sub>2</sub> O	
ijΝ,	Silica X	34-1382 48- 731	0 i	3.38 2.87	17.74 8.79 <sub>9</sub>	4.38 <sub>4</sub> 3.32 <sub>8</sub>	17.55		15.94	90.00			Х О .	Si <sub>2</sub> O <sub>6</sub> •H <sub>2</sub> O SiO <sub>2</sub>	
, U.	Socium Aluminum Silicate Species P	44- 103	•	3.18	7.10 <sub>8</sub>	4.10	10.00	17.55 10.00	8.88 10.00	90.00	90.00	120.00 90.00	C ·	Na <sub>1.84</sub> Al <sub>2</sub> Si <sub>2.85</sub> O <sub>9.88</sub> Na <sub>1.4</sub> Al <sub>2</sub> Si <sub>3.9</sub> O <sub>11.5</sub> •H <sub>2</sub> O	
	Tounkite IJSI-10B	50-1541 42- 298	i	3.71 <sub>r</sub> 3.81 <sub>r</sub>	. 3.31 <sub>8</sub> 3.69 <sub>8</sub>	4.84 <sub>4</sub> 11.0 <sub>5</sub>	12.84	12,84	82:24	90.00	90.00	120.00	Ħ.	(Na,Ca,K) <sub>8</sub> (Al <sub>6</sub> Si <sub>6</sub> O <sub>74</sub> XSO <sub>4</sub> ) <sub>2</sub> Cl•H <sub>2</sub> O C <sub>6</sub> H <sub>6</sub> N <sub>2</sub> O <sub>6</sub> -C <sub>12</sub> H <sub>28</sub> N-B <sub>2</sub> O <sub>5</sub> -SiO <sub>2</sub> -H <sub>2</sub> O	
Α,	UTD-2	52- 108 52- 108	0	14.1 <sub>x</sub> 4.05 <sub>x</sub>	3.53 <sub>6</sub> 5.13 <sub>8</sub>	4.60s 3.824	•					•	X	(C <sub>12</sub> H <sub>28</sub> N)-Al-Si-P-O-(C <sub>20</sub> H <sub>80</sub> C <sub>0</sub> OH)-H <sub>2</sub> O	H. C.OH. WILL O
7	UTD-3 UTD-3	52- 107	0	4.05 <sub>x</sub>	5.12 <sub>8</sub>	6.576				٠			X	Al <sub>2</sub> P <sub>1.6</sub> Si <sub>0.4</sub> O <sub>6.3</sub> • 0.86  (C <sub>4</sub> H <sub>9</sub> ) <sub>4</sub> N] <sub>2</sub> O • 0.16C <sub>2</sub> ; Al <sub>2</sub> P <sub>2</sub> Si <sub>0.4</sub> O <sub>6.6</sub>	ht30000tr.19H2O
	ÚTD-5 ÚTD-5	52- 104 52- 105	0	4.25 <u>.</u> 4.17 <u>.</u>	4.027 4.22 <sub>x</sub>	5.28 <sub>6</sub> 13.6 <sub>9</sub>							X ·	(C <sub>20</sub> H <sub>50</sub> C <sub>0</sub> OH)-Al-Si-P-O-H <sub>2</sub> O H-Al-Si-P-O	
12	UTD-6 Unnamed mesoporous	52- 108 49- 932.	0	16.5 <sub>2</sub> 33.6 <sub>2</sub>	5,07 <sub>7</sub> 29.0 <sub>2</sub>	13.7€ 17.5₁				•			X	(C <sub>16</sub> H <sub>36</sub> N)-Al-Si-P-O-(C <sub>20</sub> H <sub>30</sub> C <sub>0</sub> OH)-H <sub>2</sub> O Si <sub>11.4</sub> TiO <sub>24.8</sub>	
	Upnamed zeolite	5- 308 6- 211	0	4.27,	6.68 <sub>8</sub>	4.88 <sub>8</sub>		•					x	LiAISI4O10 • 2.5H2O	
ā.	Unnamed zeolita Unnamed zeolita	10- 9		3.63 <sub>x</sub> 3.28 <sub>x</sub>	3.35 <sub>x</sub> 2.96 <sub>a</sub>	5.59 <sub>8</sub> 2.74 <sub>7</sub>							X	AlTi(SiO <sub>3</sub> ) <sub>2</sub> K <sub>2</sub> Al <sub>2</sub> Si <sub>3</sub> O <sub>10</sub> -3H <sub>2</sub> O	
遊	finnamed zeolite Unnamed zeolite	10- 10 10- 11	0	2.48 <sub>x</sub> 14.0 <sub>x</sub>	3.53 <sub>7</sub> 3.00 <sub>x</sub>	3.33 <sub>6</sub> 4.25 <sub>8</sub>		·					X	Ba-Al-Si-O Pb-Al-Si-O	•
	Orinamed zeolite Unnamed zeolite	10- 12 10- 27	0	3.15 <sub>e</sub> 13.2 <sub>e</sub>	3.90 <sub>7</sub> 3.03 <sub>2</sub>	3.41 <sub>7</sub> 4.41 <sub>8</sub>	13.20	13.20	13.20	90.00	90.00	90.00	č.	K-No-Al-Si-O BaO-Al <sub>2</sub> O <sub>3</sub> -SiO <sub>2</sub> -BaCl <sub>2</sub> -H <sub>2</sub> O	
g.	Unnamed zeolite Unnamed zeolite	10- 28 10- 29		3.06 <sub>x</sub> 4.10 <sub>x</sub>	3.45 <sub>9</sub> 6.50 <sub>7</sub>	3.27 <sub>6</sub> 5.11 <sub>7</sub>			•				X X	K <sub>2</sub> O • Al <sub>2</sub> O <sub>3</sub> • 4SiO <sub>2</sub> • xKBr BaAl <sub>2</sub> Si <sub>6</sub> O <sub>14</sub> • 6H <sub>2</sub> O	***
	Unnamed zeolite	10- 60	0	4.32	$3.35_{x}$	2.518							X	Rb2Al2Si6O18 • H2O	, •, ••
	Unnamed zeolite Unnamed zeolite	11- 188 13- 129	0 -	7.45 <sub>x</sub> 4.08 <sub>x</sub>	3.09 <sub>8</sub> 3.96 <sub>9</sub>	2.82 <sub>8</sub> 9.52 <sub>8</sub>				•			X	2(KAISiO <sub>4</sub> )•3H <sub>2</sub> O Na-Ca-Al-SiO <sub>4</sub> •H <sub>2</sub> O	
	Unnamed zeolite Unnamed zeolite	15- 179 15- 259	0	9.21 <sub>x</sub> 4.23 <sub>x</sub>	6.32 <sub>x</sub> 7.07 <sub>6</sub>	3.78 <sub>2</sub> 3.62 <sub>4</sub>							X	CnAl <sub>2</sub> (SiO <sub>3</sub> ) <sub>4</sub> •6H <sub>2</sub> O AlPO <sub>4</sub> •xH <sub>2</sub> O	•
	Unnamed reolite Unnamed reolite	15- 264 15- 267		7.04 <sub>x</sub> 6.86 <sub>x</sub>	6.28 <sub>6</sub> 4.25 <sub>4</sub>	4.98 <sub>8</sub> 6.50 <sub>8</sub>							X X	AIPO <sub>4</sub> -1.67H <sub>2</sub> O	
	Unnamed zeolite	15- 272 15- 275		4.66 <sub>x</sub> 8.48 <sub>x</sub>	4.08 <sub>x</sub> 4.06 <sub>8</sub>	3.47 <sub>8</sub> 3.75 <sub>6</sub>				•			X	AlPO4*xH2O AlPO4*xH2O	
	Unnamed zeolite	16- 605 18-1210		3.13, 4.83,	6.947 2.649	3.07 <sub>6</sub> 4.16 <sub>5</sub>	9.93 11.80	9.93 11.80	9.67 11.80	99.00 90.00	90.00 90.00	90.00 90.00	T	K <sub>6.7</sub> Al <sub>5.7</sub> Si <sub>10.8</sub> O <sub>32</sub> •8H <sub>2</sub> O 1.2Na <sub>2</sub> O•0.8CaO•Al <sub>2</sub> O <sub>2</sub> •2SiO <sub>2</sub> •H <sub>2</sub> O	
2	Unnamed zeolito	20- 121	_	7.93 <sub>z</sub>	8.97.	2.979	22.00	11.00	12.00	00.00	00,00	00.00	x	BaAl <sub>2</sub> Si <sub>5</sub> O <sub>20</sub> •H <sub>2</sub> O	·
Ž.	Unnamed replits Unnamed replits	20- 212 20-1051	0	8.97 <sub>x</sub> 13.6 <sub>x</sub>	3.97 <sub>9</sub> 3.43 <sub>8</sub>	3.90 <sub>8</sub> 6.86 <sub>5</sub>	13.00	13.00	13.68	90.00	90.00	90,00	T	CaO+Al <sub>2</sub> O <sub>3</sub> +zSiO <sub>2</sub> +xH <sub>2</sub> O H <sub>2</sub> Si <sub>6</sub> O <sub>13</sub>	
Z.	Unnamed zeelite Unnamed zeelite	20-1157 20-1193		19.7 <sub>x</sub> 3.97 <sub>x</sub>	3.43 <sub>9</sub> 8.97 <sub>8</sub>	3.20 <sub>5</sub> 2.97 <sub>8</sub>	7.79	19.72	6.91	90.00	95.90	90.00	M X	NaSi <sub>11</sub> O <sub>20.6</sub> (OH) <sub>4</sub> +3H <sub>2</sub> O SrO+Al <sub>2</sub> O <sub>3</sub> +xSiO <sub>2</sub> +zH <sub>2</sub> O	
	Unnamed zeelite Unnamed zeelite	21- 132 21- 133		8.29 <sub>x</sub> 8.80 <sub>x</sub>	4.15 <sub>6</sub> 3.94 <sub>5</sub>	3.64 <sub>4</sub> 2.95 <sub>3</sub>	15.20 18.22	16.60 17.68	7.26 15.54	90.00 00.00	90.00 90.00	90.00 90.00	Ó	CaAl <sub>2</sub> Si <sub>7</sub> O <sub>18</sub> •1.7H <sub>2</sub> O CaAl <sub>2</sub> Si <sub>7</sub> O <sub>18</sub> •2H <sub>2</sub> O	
	Unnamed zeolite Unnamed zeolite	23-1314 24- 181	i i	3.10 <sub>x</sub> 4.56 <sub>x</sub>	3.07 <sub>2</sub>	3.47s 4.20x	9.81 13.38	9.81 17.58	6.59 17.36	90.00 90.00	90.00 90.00	90.00	Ť	K <sub>2.48</sub> Al <sub>2</sub> Si <sub>2.52</sub> O <sub>9</sub> I <sub>0.45</sub> *0.48H <sub>2</sub> O CaAl <sub>2</sub> Si <sub>7</sub> O <sub>18</sub> *5.5H <sub>2</sub> O	
	Unnamed scolite	25- 59		16.6	5.89 <sub>6</sub>	5.415	18.66	18.66	7.60	90.00	90.00	120.00	H	Bal.1Al2Si2 5Ogl •5.1H2O	
	Unnamed zeolite Unnamed zeolite	25- 62 25- 63	0	8.40 <sub>z</sub> 3.79 <sub>z</sub>	5.60 <sub>8</sub> 3.68 <sub>x</sub>	5.20 <sub>8</sub> 3,22 <sub>x</sub>	, .						X	BaAl <sub>2</sub> Si <sub>2</sub> O <sub>3</sub> =2.8H <sub>2</sub> O Ba <sub>2.2</sub> Al <sub>2</sub> Si <sub>2</sub> O <sub>5</sub> (OH) <sub>2.4</sub> =2H <sub>2</sub> O	
	Unnamed zeolite	25- 619 26-1318		3.01 <sub>x</sub> 3.00 <sub>x</sub>	6.96 <sub>8</sub> 6.51 <sub>9</sub>	3.08 <sub>8</sub> 2.85 <sub>8</sub>							X	K <sub>2</sub> Al <sub>2</sub> Si <sub>2.08</sub> O <sub>8.16</sub> • 3H <sub>2</sub> O NaPeAl <sub>2</sub> Si <sub>4</sub> O <sub>13</sub> • 3H <sub>2</sub> O	
ķ.	Unnamed zeolite Unnamed zeolite	27- 606 28-1035	i	3.77 <sub>x</sub> 3.24 <sub>x</sub>	6.00 <sub>9</sub> 4.67 <sub>8</sub>	3.17 <sub>7</sub> 3.74 <sub>8</sub>	7.47 15.60	11.94 15.60	4,91 15.60	90.00	90.00	90.00	0	H <sub>2</sub> Si <sub>2</sub> O <sub>6</sub> Na <sub>2</sub> Al <sub>2</sub> Si <sub>2</sub> O <sub>1</sub> •2H <sub>2</sub> O	
Ġ.	Unnamed zeolite Unnamed zeolite	28-1882 28-1884		3.77 <sub>x</sub> 5.34 <sub>x</sub>	3.53 <sub>x</sub> 5.03 <sub>x</sub>	3.74 <sub>9</sub> 4.98 <sub>x</sub>	18.10	16.00	16.00	121.00	131.00	55.00		C <sub>32</sub> H <sub>96</sub> N <sub>8</sub> O <sub>20</sub> Si <sub>8</sub> •69H <sub>2</sub> O Si <sub>2</sub> O <sub>5</sub>	:
	Unnamed reolite Unnamed reolite	80 789 31- 578	i	3.17 <sub>x</sub> 11.5 <sub>x</sub>	3.03 <sub>x</sub> 4.31 <sub>a</sub>	6,44 <sub>9</sub> 3.91 <sub>8</sub>	10.01	10.32	8.21	90.00	90.00	90.00		LiAlSiO4+H2O H2Si2O7	
5.70	Unnamed zeolite	31- 579		10.0 <sub>2</sub>	3.928	3.615							x	H <sub>2</sub> Si <sub>2</sub> O <sub>7</sub>	
	Unnamed zeolite Unnamed zeolite	81- 580 31- 581	i	3.87 <sub>x</sub> 5.48 <sub>x</sub>	7.69 <sub>5</sub> 4.05 <sub>5</sub>	5.67 <sub>5</sub> 3.55 <sub>5</sub>	11.29	9.90	8.38	90.00	103.78	90.00		H <sub>2</sub> Si <sub>2</sub> O <sub>5</sub> H <sub>2</sub> Si <sub>2</sub> O <sub>5</sub>	
	Unnamed zeelite Unnamed zeelite	81- 582 31- 583	0	5.50 <sub>x</sub> 9.65 <sub>x</sub>	4.06 <sub>7</sub> 4.85 <sub>8</sub>	3.55 <sub>7</sub> 3.35 <sub>7</sub>							X	H <sub>2</sub> Si <sub>2</sub> O <sub>5</sub> H <sub>2</sub> Si <sub>2</sub> O <sub>5</sub> •0.7H <sub>2</sub> O	
	Unnamed zeolite Unnamed zeolite	81- 584 31- 967	*	3.42 <sub>x</sub> 3.36 <sub>x</sub>	13.2 <sub>8</sub> 5.48 <sub>6</sub>	7.36 <sub>6</sub> 2.86 <sub>3</sub>	7.11 13.43	7,42 13.43	13.20 13.43	90,00 90.00	94.00 90.00	90.00 90.00		H <sub>2</sub> Si <sub>14</sub> O <sub>29</sub> • 5.4H <sub>2</sub> O KAJSi <sub>2</sub> O <sub>5</sub>	
	Unnamed zeolite Unnamed zeolite	32- 994 32- 995	0	18.4 <sub>z</sub> 3.43 <sub>z</sub>	3.41 <sub>x</sub> 6.60 <sub>5</sub>	1.83s 1.86s							X	SiO <sub>2</sub> •0.04H <sub>2</sub> O SiO <sub>2</sub> •0.2H <sub>2</sub> O	
Ž.	Unnamed zeolite	35- 60 35- 61	0	3.71 <sub>x</sub> 8.89 <sub>x</sub>	8.50 <sub>6</sub> 4.23 <sub>x</sub>	5.98 <sub>6</sub> 3.34 <sub>x</sub>	8.53 8.14	8.53 6.38	14.15 13.64	90.00 90.00	90.00 94.00	90.00 90.00		H <sub>8</sub> Si <sub>8</sub> O <sub>20</sub> • xH <sub>2</sub> O	
	Umamed zeolita Unhamed zeolite Unpamed zeolite	35- 61 35- 62 36- 63	i	3.34 <sub>x</sub> 6.73 <sub>x</sub>	3.09 <sub>x</sub> 4.74 <sub>8</sub>	6.91 <sub>8</sub> 3.83 <sub>8</sub>	13.80 19.51	13.80 13.98	23.44 21.16	90.00	90.00	90.00	T	H <sub>4</sub> Si <sub>8</sub> O <sub>18</sub> •H <sub>2</sub> O SiO <sub>2</sub>	
	Unnamed zeolite	35- 376 37- 212	0	19.6 <sub>x</sub> 3.10 <sub>x</sub>	3.42 <sub>6</sub> 2.30	3.33 <sub>3</sub> 4.55 <sub>9</sub>	19.68	19.68	19.68	90.00	90.00			Na2Al2Si 15.7O35.4*8H2O Al2P2O8*3H2O	
	Unnamed zeolito	38- 196	0	3.84₌	11.2 <sub>8</sub>	10.08							x	H-Al <sub>2</sub> O <sub>2</sub> -SiO <sub>21</sub>	
	Unnamed zeolite Unnamed zeolite	40- 72 40- 73	i	3.47 <sub>x</sub> 3.45 <sub>x</sub>	1.88 <sub>6</sub> 1.87 <sub>2</sub>	3.92 <sub>5</sub> 4.46 <sub>1</sub>	7.51 5.16	7.51 5.16	9.21 5.46	90.00 90.00	90.00 90.00	120.00	H	Li <sub>0.23</sub> Na <sub>0.06</sub> Al <sub>0.29</sub> Si <sub>0.71</sub> O <sub>2</sub> Li <sub>x</sub> Al <sub>x</sub> Si <sub>3-x</sub> O <sub>3</sub>	
	Unnamed zeolite	40- 168 42- 379	ò	9.32 <sub>z</sub> 3.85 <sub>z</sub>	10.9 <sub>9</sub> 3.82 <sub>7</sub>	4.19 <sub>8</sub> 10.2 <sub>6</sub>	18.68	13.51	8.38	90,00	90.00	90.00	X	C <sub>12</sub> H <sub>24</sub> • Al <sub>20</sub> H <sub>2</sub> O <sub>80</sub> P <sub>18</sub> Si <sub>2</sub> Na <sub>2,38</sub> Al <sub>2</sub> Si <sub>57,2</sub> O <sub>118,69</sub>	
	Unnamed zeolite	42- 380 42- 381	0	10.0 <sub>z</sub> 3.85 <sub>z</sub>	3.85 <sub>6</sub> 10.1 <sub>9</sub>	3.83 <sub>8</sub> 3.82 <sub>6</sub>							X	Li <sub>1.62</sub> Na <sub>2.1</sub> Al <sub>2</sub> Si <sub>70.7</sub> O <sub>146.25</sub> Na <sub>1.00</sub> Ba <sub>1.3</sub> Al <sub>2</sub> Si <sub>34.8</sub> O <sub>74.85</sub>	
Š	Unnamed zcolite	43- 18 43- 41	ŏ	3.87 <sub>x</sub> 9.37 <sub>x</sub>	11.3 <sub>6</sub> 6.88 <sub>5</sub>	10.2 <sub>6</sub> 3.94 <sub>5</sub>							X	Na <sub>2</sub> Ga <sub>2</sub> Si <sub>56</sub> O <sub>120</sub> B <sub>2</sub> O <sub>3</sub> -SiO <sub>2</sub>	
	Unnamed zeolite	43- 66	0	11.3 <sub>x</sub>	3.87 <sub>B</sub>	10.28							X	Na <sub>2</sub> O • 39SiO <sub>2</sub>	
	Unnamed zeolite	43- 292 43- 726	0	4.29 <sub>x</sub> 3.48 <sub>x</sub>	3.88 <sub>8</sub> 3.93 <sub>6</sub>	11.9 <sub>6</sub> 4.20 <sub>2</sub>	9.05	9.05		90.00		120.00		(CH <sub>3</sub> ) <sub>4</sub> NO • 0.40Na <sub>2</sub> O • 43.38SiO <sub>2</sub> • 9.0H <sub>2</sub> O Ga(H <sub>3</sub> (PO <sub>4</sub> ) <sub>2</sub> ) • 2H <sub>2</sub> O	
	Unnamed zeolite Unnamed zeolite	43- 727 43- 728	0	2.89 <sub>x</sub>	2.17g 2.90g	8.66s 2.18s	9.62 9.66	8.67 8.71	14.24	90.00	90.00	90.00	0	(C <sub>6</sub> H <sub>15</sub> NO <sub>8</sub> )-G <sub>02</sub> O <sub>3</sub> -P <sub>2</sub> O <sub>5</sub> -H <sub>2</sub> O (C <sub>0</sub> H <sub>15</sub> NO <sub>3</sub> )-F <sub>02</sub> O <sub>3</sub> -P <sub>2</sub> O <sub>5</sub> -H <sub>2</sub> O	
Ž,	Unnamed zeolite	43-1660 44- 703	*	3.60 <sub>x</sub> 4.30 <sub>x</sub>	6.24 <sub>7</sub> 4.58 <sub>7</sub>	4,41 <sub>8</sub> 3.95 <sub>8</sub>	8.83 22.17	8.83 14.95	8.63 13.63	90.00 90.00	90.00		0	C <sub>4</sub> H <sub>17</sub> O <sub>28</sub> Si <sub>12</sub> [(C <sub>5</sub> H <sub>5</sub> ) <sub>2</sub> Co] <sub>4</sub> [Si <sub>84</sub> A] <sub>4</sub> O <sub>176</sub> ]	
	Unnamed zeolite	44- 784 44-1142	0	11.6 <sub>x</sub> 12.4 <sub>x</sub>	3.42 <sub>3</sub> 5.33 <sub>2</sub>	2.89 <sub>2</sub> 8.06 <sub>2</sub>							X	KA10HPO4+H2O C228H5.7N0.38+GeS2	
	Unnamed zeolite Unnamed zeolite	44-1148 44-1144	0	9.04 <sub>x</sub> 8.47 <sub>z</sub>	12.3 <sub>6</sub> 9.45 <sub>2</sub>	3.22 <sub>8</sub> 5.06 <sub>1</sub>							X	C2.4H5.2N0.4 • GeS2 C2.23H6.96N0.68 • SDS2	
ţ.	Unnamed zeolite	44-1145	0	9.63 <sub>x</sub>	6.06 <sub>3</sub> 4.40 <sub>3</sub>	3.91s 2.81							X X	C <sub>1.04</sub> H <sub>3.12</sub> N <sub>0.28</sub> •Ga <sub>0.25</sub> Ge <sub>0.75</sub> S <sub>2</sub> C <sub>1.44</sub> H <sub>4.32</sub> N <sub>0.35</sub> •Cu <sub>0.11</sub> Ge <sub>0.89</sub> S <sub>2</sub>	
	Unnamed resilte Unnamed resilte Unnamed resilte	44-1146 44-1147	0	8.43 <sub>x</sub> 7.93 <sub>x</sub>	4.403 3.17 <sub>8</sub> 4.30 <sub>x</sub>	4.90 <sub>4</sub> 3.15 <sub>g</sub>							X	C1.4474.32Nd.38*C40,11G40,3952 C1.6H4.6Nd.4*Ge0.77Mn0.23S2 Na2Sn1.36Si2.05O7,86*2H2O	
	Unnamed zeolite	46- 538 47- 357	0	5.20 <sub>x</sub> 10.9 <sub>x</sub>	3.512	4.312							x	(K,Na)Al <sub>2</sub> Si <sub>78</sub> O <sub>159.5</sub> °xC <sub>5</sub> H <sub>14</sub> ClNO	
Ç	Unnamed zeolite Unnamed zeolite	47- 395 47- 396	0	3.54 <sub>2</sub> 2.98 <sub>4</sub>	3.60 <sub>6</sub> 6.03 <sub>6</sub>	2.52 <sub>4</sub> 4.82 <sub>6</sub>	•						X	BePO <sub>4</sub> Cl <sub>4</sub> BePO <sub>4</sub> Cl <sub>5</sub>	
	Unnamed zeolite Unnamed zeolite	47- 397 47- 696	0	3.06 <sub>x</sub> 15.5 <sub>x</sub>	6.16 <sub>9</sub> 3.44 <sub>6</sub>	4.88 <sub>0</sub> 8.30 <sub>3</sub>							X	BePO4Cla Nas,6Al3P0,7Si,38O283 • 56H2O	•
34	Unnamed scolite	47- 697	0	13.5,	3.409	3.55 <sub>6</sub>							X	Na <sub>0.16</sub> Al <sub>2.5</sub> P <sub>0.7</sub> Si <sub>138</sub> O <sub>282</sub>	

					Z	eolite	Stru	cture :	Type N	ame-	Coc	le	
				Stronge			Paran	neters	Ce	ll Angl	ies		. Chemiçal
Zeolite Name	PDF#	QM	R	eflection	IS	<u>a</u>	b	С	α	<u>B</u>	<u> </u>	Sys.	Formula
Unnamed zeolita Unnamed zeolita Unnamed zeolita Unnamed zeolita Unnamed zeolita Unnamed zeolita	47- 717 47- 75 48- 49 48- 49 48- 49	0	1.92 <sub>x</sub> 6.59 <sub>x</sub> 16.3 <sub>x</sub> 9.32 <sub>x</sub> 4.19 <sub>x</sub>	3.00 <sub>n</sub> 4.05 <sub>7</sub> 5.47 <sub>5</sub>	3.29 <sub>8</sub> 3.86 <sub>x</sub> 4.07 <sub>6</sub> 5.25 <sub>5</sub> 11.4 <sub>8</sub>	9.53	9.53 `	9.10	90.00	90.00	90.00	X X X X	K <sub>0.4</sub> Na <sub>1.6</sub> Al <sub>2</sub> Si <sub>4</sub> O <sub>12</sub> *6H <sub>2</sub> O Na <sub>2</sub> O-Al <sub>2</sub> O <sub>2</sub> -SiO <sub>2</sub> -H <sub>2</sub> O Al <sub>2</sub> PO <sub>4</sub> SiO <sub>6</sub> (C <sub>2</sub> H <sub>10</sub> N <sub>2</sub> O <sub>2</sub> +Al <sub>2</sub> PO <sub>4</sub> C <sub>0.44</sub> H <sub>2.2</sub> N <sub>0.4</sub> Al <sub>2</sub> PO <sub>4</sub>
Unnamed zeolite Unnamed zeolite Unnamed zeolite Unnamed zeolite Unnamed zeolite	48- 543 48- 673 48-102 49- 93 49- 93	: i	3.49 <sub>x</sub> 2.98 <sub>x</sub> 3.11 <sub>k</sub> 32.6 <sub>x</sub> 7.16 <sub>x</sub>	2.864 2.61 <sub>3</sub> 28.2 <sub>3</sub>	2.85 <sub>3</sub> 3.84 <sub>3</sub> 3.27 <sub>2</sub> 17.1 <sub>1</sub> 7.26 <sub>6</sub>	9.48 13.67 10.54	8.96 13.81 10.05	9.66 13.85 14.37	90.00 100.12 90.00	89.46 102.48 90.00	90.00 62.78 90.00	A X	BePO <sub>4</sub> Cl <sub>7</sub> K <sub>B</sub> B <sub>24</sub> FO <sub>4/8</sub> • 5.9H <sub>2</sub> O KAISiO <sub>4</sub> HAISi <sub>229</sub> O <sub>123</sub> C <sub>B</sub> H <sub>1</sub> <sub>4</sub> N <sub>2</sub> -H <sub>2</sub> Zn <sub>2</sub> (PO <sub>4</sub> ) <sub>3</sub>
Unnamed zeolite Unnamed zeolite Unnamed zeolite VSZ-5 ZKU-4	49- 93/ 50-167/ 51-152 39- 4/ 42- 30'	0 8	7.30 <sub>x</sub> 3.10 <sub>x</sub> 11.9 <sub>x</sub> 3.38 <sub>x</sub> 11.6 <sub>x</sub>	7.60 <sub>x</sub> 3.21 <sub>9</sub> 5.51 <sub>8</sub>	3.43 <sub>2</sub> 3.14 <sub>4</sub> 6.92 <sub>6</sub> 3.14 <sub>8</sub> 2.69 <sub>9</sub>	15,15 13.82 18.47	15.94 13.82 18.47	9.85 7.50 18.47	90.00 90.00	90.00 90.00 90.00	90.00 120.00 90.00	Х Н	C4H,12N+H3Zn(PO4)s K264Zn1,22Al0,072O8,10*XH2O K264Zn1,22Al0,72O20*10H2O Al2O3-4.48SiO2-1.38Na2O-0.24P2O6*5.55H2O NagO-K2O-Al2O3-SiO2 O-20-20-20-20-20-20-20-20-20-20-20-20-20-
ZKU-5 ZSM-25 ZSM-25 ZSM-43 ZSM-43	42- 30: 43- 2: 44- 1: 42- 37: 42- 37:	0 0	3.77 <sub>x</sub> 3.24 <sub>x</sub> 3.25 <sub>x</sub> 4.76 <sub>x</sub> 4.74 <sub>x</sub>	8.05 <sub>2</sub> 7.04 <sub>9</sub> 3.22 <sub>9</sub>	2.85 <sub>8</sub> 7.03 <sub>9</sub> 3.11 <sub>8</sub> 7.58 <sub>6</sub> 3.77 <sub>5</sub>			•				X X X X	Na <sub>2</sub> -K <sub>2</sub> O-Al <sub>2</sub> O <sub>3</sub> -SiO <sub>2</sub> Na <sub>1</sub> -xAl <sub>2</sub> Sia <sub>2</sub> O <sub>2</sub> ar 0.12(C <sub>2</sub> H <sub>5</sub> ) <sub>4</sub> N <sub>2</sub> O •0.37Na <sub>2</sub> O •Al <sub>2</sub> O <sub>3</sub> •8.5SiO <sub>2</sub> Al <sub>2</sub> O <sub>3</sub> •11.Na <sub>2</sub> O •0.38C <sub>3</sub> O •0.50C <sub>6</sub> H <sub>15</sub> CiNO •xH <sub>2</sub> O Al <sub>2</sub> O <sub>3</sub> •15.1SiO <sub>2</sub> •0.03Na <sub>2</sub> O •0.60C <sub>3</sub> O •0.67C <sub>6</sub> H <sub>15</sub> CiNO •xH <sub>2</sub> O
ZSM-43 Zcolite Barrer L, (Sr) Zcolite Beta Zcolite CHNUAP-3 Zcolite CHNUAP-4	44- 69: 17- 14- 47- 18: 49- 91: 49- 91	8 O	4.75 <sub>x</sub> 2.55 <sub>x</sub> 3.92 <sub>x</sub> 8.71 <sub>x</sub> 6.89 <sub>x</sub>	1.49 <sub>k</sub> 11.3 <sub>2</sub> 3.70 <sub>3</sub>	7.56 <sub>7</sub> 2.58 <sub>8</sub> 3.00 <sub>2</sub> 3.64 <sub>2</sub> 3.98 <sub>5</sub>			•		•		X X X X	Cs1,2Al <sub>2</sub> Siy,EO <sub>25,2</sub> SrAl <sub>4</sub> Si <sub>2</sub> O <sub>10</sub> (OH) <sub>2</sub> Ca <sub>4</sub> H <sub>1,8</sub> N <sub>0,8</sub> M <sub>0.1,2</sub> Fe <sub>2</sub> Si <sub>3</sub> 7O <sub>78</sub> *2OH <sub>2</sub> O C <sub>2</sub> H <sub>3</sub> N <sub>1</sub> *Al <sub>2</sub> O <sub>3</sub> *P <sub>2</sub> O <sub>3</sub> *4OH <sub>2</sub> O C <sub>2</sub> H <sub>3</sub> N <sub>1</sub> *S <sub>4</sub> S <sub>2</sub> *Al <sub>2</sub> O <sub>3</sub> *P <sub>2</sub> O <sub>6</sub> *4OH <sub>2</sub> O
Zeolite Cs-D Zeolite D, (Cs) Zeolite D, (Rb) Zeolite D, (Sr) Zeolite ECR-9	22- 17 39- 13 22- 78 17- 75 48- 64	i i 7 7 O	3.14 <sub>x</sub> 3.02 <sub>x</sub> 3.09 <sub>x</sub> 3.54 <sub>x</sub> 7.61 <sub>x</sub>	3.14 <sub>9</sub> 2.97 <sub>8</sub> 3.48 <sub>2</sub>	2.86 <sub>x</sub> 2.88 <sub>6</sub> 2.83 <sub>8</sub> 9.51 <sub>8</sub> 3.04 <sub>9</sub>	10.07 18.50 14.12	10.07 21.00 16.14	13.36 7.12 8.65	90.00 90.00 90.00	90.00 90.00 90.00	90.00 90.00 90.00	X	CaASiO.*12H2O CaASiO.*H2O R\$ASiO.*1.3H2O SrAI-SI-O-H2O 0.14Nag-0.98K2O*Al <sub>0.1</sub> Ga <sub>1.9</sub> O <sub>2</sub> *5.04SiO <sub>2</sub>
Zeolite G, (Ba) Zeolite J, (Ba) Zeolite K, (Ba) Zeolite K-H Zoolite K-I	19- 9 19- 9 19- 9 16- 69 18- 98	2 O 3 O 2	3.95 <sub>x</sub> 3.12 <sub>x</sub> 3.16 <sub>x</sub> 3.25 <sub>x</sub> 13.3 <sub>x</sub>	11.4s 10.6s 3.18s	3.08s 4.58s 6.07s 7.14s 2.99s	18.89 10.00 13.41	18.89 14.40 13.41	15.16 14.30 13.20	90.00 90.00 90.00	90.00 90.00 90.00	90.00 120.00	X X O	Baahjsisou*xHyO Baahjsisoy*xHyO Baahjsisoy*xHyO Kaahjsisoy*xHyO Kaahjsisoy*xHyO
Zeolite K-I Zeolite K-Z Zeolite LZ-276 Zeolite LZ-276 Zeolite LZ-276	22- 79 22- 79 49- 91 49- 92 49- 92	4 9 0 O	11.8 <sub>x</sub> 2.92 <sub>x</sub> 4.29 <sub>x</sub> 6.84 <sub>x</sub> 5.01 <sub>x</sub>	6.830	2.93 <sub>7</sub> 3.65 <sub>7</sub> 2.91 <sub>9</sub> 4.28 <sub>8</sub> 3.43 <sub>5</sub>	13.51 13.64	13.51 13.64	13.50 16.51	90.00	90.00	120.00	X	KalsiO, *2H <sub>2</sub> O Kald(SiO <sub>4</sub> );OH *3.5H <sub>2</sub> O Na <sub>1,4</sub> AlJSi7, <sub>2</sub> TO <sub>10,07</sub> *xH <sub>2</sub> O (NH <sub>2</sub> );Al <sub>3</sub> Si7, <sub>2</sub> TO <sub>10,4</sub> *xH <sub>2</sub> O ( <sub>H</sub> H <sub>2</sub> O <sub>4</sub> NO*0.19Na <sub>1</sub> ,Al <sub>2</sub> Si <sub>0.71</sub> O <sub>17,12</sub> *xH <sub>2</sub> O
Zeolito MCM-47 Zeolite MCM-48 Zeolite OE Zeolite Phi Zeolite SCS-15	48- 63 50- 51 43- 3 38- 26 48-106	1 * 9 0 1 0	11.2 <sub>x</sub> 33.1 <sub>x</sub> 3.77 <sub>x</sub> 3.43 <sub>x</sub> 9.20 <sub>x</sub>	3.50 <sub>4</sub> 28.6 <sub>1</sub> 11.5 <sub>8</sub> 2.92 <sub>x</sub> 4.45 <sub>1</sub>	4.371 17.31 6.658 9.519 4.251	81.09	81.09	81.09	90.00	90.00	90.00	X X X X	.Na <sub>0.20</sub> SiO <sub>2</sub> (OH) <sub>0.30</sub> *xC <sub>14</sub> H <sub>30</sub> N <sub>2</sub> SiO <sub>2</sub> K <sub>1.22</sub> Na <sub>0.44</sub> A <sub>12</sub> Sig <sub>.5</sub> C <sub>71.18</sub> *5.8H <sub>2</sub> O Na <sub>1.36</sub> Al <sub>2</sub> Sig <sub>.5</sub> C <sub>71.30</sub> *5.49H <sub>2</sub> O CH <sub>3</sub> Al <sub>0.5</sub> N <sub>0.5</sub> O <sub>2</sub> P <sub>0.6</sub>
Zeolite SCS-17 Zeolite SCS-18 Zeolite SCS-19 Zeolite SCS-20 Zeolite SCS-21	48-106 48-106 48-106 48-106 48-106	2 0 3 0 4 0	11.2 <sub>x</sub> 9.80 <sub>x</sub> 12.4 <sub>x</sub> 9.80 <sub>x</sub> 5.90 <sub>x</sub>	9.20 <sub>8</sub> 3.60 <sub>8</sub> 6.20 <sub>1</sub> 4.90 <sub>8</sub> 6.70 <sub>8</sub>	12.2 <sub>4</sub> 4.47 <sub>4</sub> 14.9 <sub>1</sub> 3.26 <sub>4</sub> 4.70 <sub>6</sub>							X X X X	C1,13H3,36Alo,5Ne,66O2Pos CoseH1,66Alo,5Ne,8O2Pos CoseH2,86Alo,5Ne,8O2Pos C0,73H2,16Alo,5No,3O2Pos Ce,3H2,16Alo,5No,7O2Pos
Zeolite SSZ-28 Zeolite SSZ-28 Zeolite ULM-5	49- 91 49- 91 49- 93	6 O	5.16 <sub>x</sub> 13.2 <sub>x</sub> 14.7 <sub>x</sub>	3.39 <sub>7</sub> 11.1 <sub>7</sub> 12.8 <sub>8</sub>	5.73 <sub>7</sub> 5.66 <sub>6</sub> 7.24 <sub>2</sub>	10.25	18.41	24.64	90.00	90.00	90.00	. X X	K <sub>2</sub> O-Al <sub>2</sub> O <sub>3</sub> -SiO <sub>2</sub> K <sub>2</sub> O-Al <sub>2</sub> O <sub>3</sub> -SiO <sub>3</sub> C <sub>24</sub> H <sub>96</sub> •N <sub>2</sub> Ga <sub>16</sub> (PO <sub>4</sub> ) <sub>16</sub> (OH) <sub>2</sub> F <sub>7</sub> •6H <sub>2</sub> O

Zeolite Name	PDF#	Structure Type Code	Zeolite Name	PDF#	Structure Type Code	Zeolite Name	PDF#	Structure Type Code
ABW,(Li)	46- 631	ABW	Beryllophosphate-G	46- 293	GIS	ECR-84	51- 168	229
ACP-1 AG4	49- 624 43- 48	ACO 2Z9	Beryllophosphate-H Beryllophosphate-P	46- 298 46- 295	BPH ANA	ECR-6 EMT (Na)	47- 235 46- 566	CAN
AG6 .	43- 50	· `2Z9	Beryllophosphate-R	46- 292	RHO	EU-12	48- 733	EMT. ZZ9
AGB	45- 49	ZZ9 MOFI	Bikitaite	14- 168	, BIK	EU-19	46- 567	221
AMS-1B AMS-1B	42- 382 42- 383	MIFT	Boggsite Brewsterite	42-1379 41-1356	BOG BRE	Edingtonite Edingtonite, (K,C))	25- 60 46- 123	EDI EDI
CAMS-1Cr ·	43- 37 47- 766	MFI MFI	Bystrite CAM-1	45-1373	LOS 229	Edingtonite, (Li)	27-1212	EUI
AMS-1Cr AMS-1Cr	47- 767	MFI	CAPSO-34	50-1680 47- 701	CHA	Epistilbite - Brionite	39-1381 39-1379	EPI ERI
Alghanite	46-1264	AFG	CF-3	39- 155	MTN	Ethylene glycol sodalite	49-1063	SOD
5:A1As04-3 5:A1As04-4	42- 102 42- 103	ZZ9 ZZ9	CFAP-7A CFAP-7B	42- 6 42- 7	729 729	Paujasite Paujasite	12- 229 12- 246	FAU
A1As04-5	46- 890	ZZ9 (	CFAP-7B	42- B	229	Faujasite	28-1034	FAU FAU
AlAsO4-6	47: 789 41: 563	2Z9 ZZ9	CFSAPO-1(A) CFSAPO-1(B)	41- 113 41- 114	2Z9 2Z9	Paujasita	39-1380 . 39-1382	FAU
AlAsO4-D AlPO-21 (Pyrrolidine)	45- 184	AWO	CFSAPO-1(C)	41- 115	ZZ9	Ferriorite Ferriorite, (Ga)	46- 80	FER FER
AIPO4-5 AIPO4-5	39- 216 40- 71	AFI AFI	CIT-1 CIT-1	50-1694 50-1703	CON	Perrimordenite Franzinite	48- 513 30-1170	MOR FRA
AIPO4-5	41- 44	ĀFI .	CIT-1	62- 110	CON	GaP04-21	45- 180	AWO
AIPO4-5	41- 557 44- 46	AFI AFI	CIT-5 CSZ-1	51-1382 47- 722	CFI EMT .	GaPO4-M1 GaPO4-M2	51- 240	221
#:AIPO4-6 #:AIPO4-5	48-1080	AFI	CSZ-1	47- 722	FAU	Garronite	51- 241 39-1374	ZZ1 GIS
AIPO4-8 AIPO4-8	43- 561 46- 551	TSA TSA	CSZ-1 CSZ-1	47- 723 47- 723	EMT FAU	Gar <del>ron</del> it <del>a</del> Genthelvita	51-1499 38- 467	GIS SOD
AIPO4-8	47- 245	AET	CT-6	48- 161	229	Giamondine	20- 452	GIS
6 - PO4-9	43- 562	ZZ1 AEL	CZH-5 Ca-Tetranatrolite	47- 721	MTW	Gismondine	39-1373	GIS
(A)P04-11 (3)A)P04-11	41- 556 43- 563	AEL	Calcined ITQ-3	42-1381 49- 623	na <b>t</b> Ite	Gismondine (dehydrated) Giusoppettite	46- 341 86- 479	GIS ZZ4
AIPO4-11	47- 599	AEL	Calcined ITQ-4	49- 619	IFR	Gmelinite	88- <b>43</b> 5	GME
AIPO4-12 EZAIPO4-12-TAMIJ	43- 564 41- 565	ATT ATT	Cancrinite Cancrinite	34- 176 46-1332	CAN CAN .	Gobbinsite Gonnardite	35- 559 10 <b>- 473</b>	GIS Nat
AlPO4-12-TAMU FAIPO4-14	48- 565	AFN	Cancrinite (Cs,Li,Ti)	48- 520	CAN	Gonnardite	42-1380	NAT
AIPO4-14 AIPO4-14	46- 630 46- 751	apn apn	Cancrinite, (Li,Ca) Cancrinite, (Li,Ca)	45- 124 47- 252	CAN CAN	Gonnardite Goosecreekite	45-1324 35- 469	NAT GOO
AIPO4-14 AIPO4-14A	47- 603	apn	Cancrinite, (Li,TI)	47- 253	CAN	Gottardiite	49-1814	NES
7AIPO4-14A 23AIPO4-15	47- 325 45- 183	221 221	Cesium silicotitanate Chabazito	50- 58 34- 187	ZZ1 CHA	Gottardiita H-Ful	49-1831 46- 748	NES ZZ9
AlPO4-15 AlPO4-16	41- 564	TEA	Chabazite	52- 784	CHA	H-Nul	46- 747	RUT
AIPO4-16 AIPO4-17	43- 566 41- 574	ast Eri	Chabazite (Al) Chabazite, (Ba)	44- 248 43- 187	CHA CHA.	Harmotome	39-1377 12- 687	PHI PHI
AIPO4-17 AIPO4-17 AIPO4-17	43- 567	ERI	Chabazite, (Co,P)	45- 119	CHA.	Harmotome, (Na) Hauyne	37- 473	SOD
AlPO4-17	47- 608 43- 568	ERI AEI	Chabazite, (Ce) Chabazite, (Ce)	44- 45 44- 48	CHA CHA	Hauyne Hauyne-Pb	50-1644 29-1221	SOD SOD
AlPO4-18 (AlPO4-18	45- 117	AEI	Chabazite, (K)	12- 194	CHA	Heulandite	41-1357	HEU
AlPO4-18 AlPO4-18	45- 118 47- 608	AEI AEI	Chabazite, (Sr) Chabazite-Na	45-1427 19-1178	CHA CHA	Houlandite-Sr Hydrogen Nu-3	24- 469 46- 750	HBU LEV
AIPO4-20	43- 569	SOD	Chiavennite	35- 602	CHI	Hydroxysodalite .	11- 401	SOD
A1PO4-20 A1PO4-20	45- 509 60-1697	SOD SOD	Chiral Zincophosphate Clathrasil	49 621 38-1823	CZP NON	ISI-4 ITQ-3	43- 15 51-1381	MTT ITE
AlPO4-20 (Sodalite)	47- 597	SOD	Clathrasil	42- 6	<b>ZZ9</b>	TYQ-4	51-1380	IFR
AIPO4-21 EAIPO4-21	48- 571 45- 179	OWA OWA	Clinoptilolite Clinoptilolite, (Na)	89-1883 47-1870	HEU HEU	ITQ-7 ITQ-9	51-1379 51-1878	isv Stf
AIPO4-21	45- 455	AWO	Clinoptilolite-(Cs)	44-1398	HEU	Kenyaite, (H)	37- 385	ZZ1
AIPO4-22	41- 567	AWW AWW	Cloverite	46- 558	CTO	Kenyaite, (H) Kryptofix 222-AlPO4	37- 386 51- '76	ZZ1 LTA
AIPO4-22 AIPO4-22	43- 570 45- 456	AWW	Cloverite CoAPO	50-1705 52- 161	PAU	Kryptofix 222-AlPO4	61- 77	LTA
\$2,01PO4-22 \$4,01PO4-23	47- 598 43- 573	AWW ZZ9	CoAPO-20 CoAPO-34	50-1701 50-1479	SOD CHA	LZ-200 Laumontite	47- 716 26-1047	229 Lau
AlPO4-25	41- 566	ATV	CoAPO-34	50-1480	CHA	Laumontite	46-1325	LAU
APO4-25 7APO4-28 7APO4-28 7APO4-31	43- 572 47- 610	ATV ZZ9	CoAPO-34 CoAPO-48	60-1481 52-1510	CHA GIS	Lexurite Lexurite	17- 749 41-1392	SOD SOD
AIPO4-28	47- 611	<b>2</b> 29	CoAPO-44	46- 839	CHA	Laxurite	41-1393	SOD
AlPO4-31 AlPO4-31	49- 574 45- 177	OTA OTA	CoAPO-5 CoAPO-50	50- 612 41- 559	AFI AFY	Lexurite Leucite	42-1312 38-1423	SOD ANA
16.	47- 711	ATT	CoAPSO-44	46- 340	CHA	Leucite	52- 129	ANA
AlPO4-33 SAlPO4-33 AlPO4-34	47- 712 47- 166	ATT CHA	CoAPSO-47 Cobalt-Gallium-Phosphate-5	46- 342 49- 618	CHA CGF	Levyns Levyns	26-1381 46-1263	Lev Lev
AIPO4-34	47- 167 47- 168	CHA CHA	Cobalt-Gallium-Phosphate-6	49- 622 46-1405	CGS 779	Levyne Levyne	51- 51 51- 52	LEV
MAIDO4.24	47- 184	CHA	CuAPO-20	50-1700	SOD	Linde A	11- 689	LTA
AIPO4-34 AIPO4-40 AIPO4-41 AIPO4-41	62- 162	AFR	DPZ-1A	47- 249	FAU	Linde A. (Li)	14- 298	LTA ·
AIPO4-41	46- 5 <del>56</del> 62- 211	AFO AFO	DPZ-1B DPZ-2A	47- 250 48- 516	FAU RHO	Linde B1 Linde B2	38- 327 38- 328	GIS. GIS
CENTI-04-25	46- 338	AFT	DPZ-2B	47- 248	RHO	Linde B3	38- 329	GIS
AIPO4-52 AIPO4-52 AIPO4-52, calcined,	46- 697 46- 698	APT APT	DPZ-40 DPZ-4A	52-1408 48- 517	ABW ABW	Linde B7 Linde L	38- 330 22- 773	GIS LTL
AIPO4-52, calcined,			DPZ-4B	48- 518	ABW	Lindo L Liottite	39- 224 47-1742	LTL LIO
AIPO4-54	50-1702 42- 28	AFT VFI	DPZ-4C DPZ-4D	48- 519 47- 251	ABW ABW	Lithium Zinc Phosphate		•
AlPO4-C	41- 560	APC	DPZ-7A	47- 248	SOD	Hydrate	52-1483	ABW
AIPO4-C AIPO4-C	41- 561 45- 457	APC APC	DPZ-7B Dachiardite	47- 247 18- 467	SOD DAC	Losod Losod, (Na)	31-1269 39- 221	LOS LOS
APO4-D APO4-H1	41- 562	APD VPI	Dachlardite, (Na)	30-1149	DAC SOD	Lovdarite Lovdarite	25-1302 39-1367	LOV
AIPO4-H2	48- 33 . 46- 557	AHT	Danalite	11- 491 50-1578	CAN	MAPO-39	46- 681	ATN
AIPO4-H3	48- 34	APC	Davyne Deca-dodecasil-SR	38- 651	DDR	MAPO-39	50-1704	ATN
AIPO4-H4	48- 35 41- 569	ZZ9 CAS	Deca-dodecasil-3R Dodecasil-1H	41- 571 41- 572	DDR DOH	MAPO-41 MAPO-43	46- 682 42- 19	AFO G18
Aluminosilieste, (Cs)	33-1273 40- 474	GIS ANA	Dodecasil-3C	39- 227	MTN	MAPO38 MAPSO-38, calcined	46- 559 52-1177	ATS ATS
Ammonioleucito	40- 474 51-1599	ANA ANA	Dodecasil-3C EAB	45- 284 41- 573	. MTN EAB	MAPSO-46	41- 558	AFS
Ammonialeucite, (TI) Analcime Analcime Analcime (Cs.Ga)	19-1180	ANA	ECR-1	46- 652	ZZ4	MCM-1 MCM-21	46- 645 43- 88	ZZ9 ZZ9
e Analcime Analcime, (Cs,Ga)	41-1478 45- 181	ANA ANA	ECR-1 ECR-1	46- 867 46- 868	224 224	MCM-22	48- 75	MWW
Analcime, (Cs,Ga)	45- 182	ANA	ECR-1	47- 288	MAZ	MCM-41	49-1711	2Z9
Analcime, (Ga) Analcime, (Mg)	44- 32 42-1378	ANA ANA	ECR-1 ECR-10	47- 288 46- 539	MOR RHO	MCM-41 MCM-48	49-1712 51-1591	229 229
Apalcime, (NH4)	14- 19	ANA	ECR-15	47- 236	ZZ9 PAU	MCM-58- MCM-9	52- 113	IFR
Analcime (NH4)	45- 515 43- 136	ANA ANA	ECR-18 ECR-2	47- 354 39- 294	LTL	MCM-9	. 42- 427 46- 646	VFI VFI
Analcime, (Rb.Mg)	43-1489	ANA	ECR-26	50-1692	GMB	Magadiite	42-1850	ZZ1
de Barrerite	29-1185 45-1482	sti eab	ECR-26 ECR-30	50-1693 47- 655	GMB EMT	Magadiite, (H) Mazzite	29- 668 38- 426	ZZ1 MAZ
Beryllophosphata H	41- 568 46- 294	BPH EDI	ECR-30	47- 655	FAU	Melanophlogite Merlinoite	25- 7 29- 989	MEP . MER
Beryllophosphate-E	40- 234	501	•				- 20J	evasität

eolite Name	PDF#	Structure Type Code	Zeolite Name	PDF#	Structure Type Code	Zeolite Name	PDF#	Structure Type Code
solite te heulandite	24-1064 24- 765	NAT ZZ9	Rho (Tl,Be,As) Rho (Tl,Be,P)	· 46- 554 46- 555	RHO RHO	Sodalite, (Ge,B(OH)4) Sodalite, (Ge,Br)	43- 246 43- 188	SOD
avariscite CoAPO-5	83- 32 48- 684	221 AFI	Rho, (Cs) Rho, (Cs)	39-1366 40- 59	RHO RHO	Sodalite, (Ge,Br)	43- 248 43- 139	SOD
rosommite	20- 743	CAN .	Rho, (NH4)	44-1498	RHO	Sodalite, (Ge,Cl) Sodalite, (Ge,Cl)	43- 247	SOD SOD
-SAPO-11 APO-11	48- 104 41- 555	AEL AEL	Rho, (NH4) Rho, (NH4)	44-1499 44-1500	RHO RHO	Sodalite, (Ge,ClO4) Sodalite, (Ge,I)	43- 244 43- 140	SOD
APO-20 CoAPO-5	50-1698 48- 685	SOD	Rho, (Na,Ca) Roggianite	43- 53 39- 366	RHO RON	Sodalite, (Ge,I) Sodalite, (Ge,NO3)	43- 249 43- 248	SOD
ntesommaite	<del>46</del> -1361	MON ·	SAPO-11	41- 23	AEL ·	Sodalite, (GeBr)	43-1487	800
rdenite rdenite	6- 289 29-1257	MOR MOR	SAPO-11 SAPO-11	41- 24 42- 428	AEL AEL	Sodelite, (K,Cl) Sodelite, (NH4)	41- 72 14- 17	SOD SOD
rdenite rdenite, (Ba)	47- 410 44- 48	MOR MOR	SAPO-11 SAPO-11	46- 647 47- 613	AEL AEL	Sodalite, (NO2,CO3) Sodalite, (Na,ClO4)	48- 443 44- 79	SOD
rdenite, (Ca)	11- 155	MOR	SAPO-11	47- 614	AEL	Sodalite, (Na,Zn,P)	45- 122	SOD
rdenite, (Cs) rdenite, (NH4)	44-1391 48- 171	MOR MOR	SAPO-17 SAPO-17	47- 620 47- 621	eri Eri	Sodalite, (NaNO3) Sodalite, (Rb,Cl)	50- 248 41- 73	SOD SOD
rdenito, (Na) rdenito, (Na,Li)	31-1268 38- 318	MOR MOR	SAPO-20 SAPO-20	45- 510 47- 615	SOD SOD	Sodalite (Zn,As) Sodium Aluminum Silicato	45- 134 48- 731	SOD ZZ9
rdenite, (Rb)	44-1387	MOR .	SAPO-20	47- 616	SOD	Species F, (Na)	25- 777	EDI
i-1 i-2	51-1422 51- 80	229 221	SAPO-31 SAPO-31	47- 631 47- 632	ATO . ATO	Species P Species P1, (Na)	44- 103 25- 778	ZZ9 GJS
i-4 T	51-2111 44- 49	2Z9 Nat	SAPO-34 SAPO-34	47- 429 47- 617	CHA CHA	Species P2, (Na) Sr exchanged	25- 779 47- 2	GIS FAU
·1 Po ambou and	35-1501	ZZ9 FAU	SAPO-35	47- 622	LEV	Stellerite	25- 124	STI
-Ba exchanged X-Zeolite	47- 1 47- 736	PAU	8APO-85 SAPO-37	47- 623 47- 624	LEV PAU	Stilbite Stilbite, (Cu)	24- 894 46-1082	STI STI
Z-21 trolite	42- 21 45-1413	LTN NAT	SAPO-37 SAPO-40	47- 625 47- 626	FAU APR	Stilbite, (Na,Ca,Cu) TASO-20	45-1256 46- 865	STI SOD
trolita, (Ga)	33-1243 34- 583	NAT NAT	SAPO-40 SAPO-41	47- 627 47- 633	AFR AFO	TASO-20	45- 866	SOD
trolite, (Oa) trolite, (K) -	38- 337	NAT	SAPO-41	47- 634	APO	TASO-38 TASO-38	46- 860 46- 861	MOR MOR
tural ZSM-5 pheline hydrate	50-1665 10- 459	MFI JBW	SAPO-42 SAPO-44	47- 628 47- 629	LTA CHA	TASO-48 TASO-48	46- 862 46- 863	MEL MEL
pheline hydrate pheline hydrato III	10- 460 12- 247	JBW ZZ9	SAPO-44 SAPO-46	47- 630 50-1711	CHA AFS	TASO-49	46- 864	MTW
APO-20	50-1699 42- 25	SOD NON	SAPO-47	41- 570	CHA	TS-NU-1, as-synthesized	52-1184 43- 313	RUT MFI
nasil sean	17- 538	COS	SAPO-5 SAPO-5	47- 618 47- 619	API AFI	TSZ Terranovaite	44- 115 50-1714	MFI TER
-1 -1	43- 52 47- 594	RUT RUT	SAPO-56	49- 659 52-1178	API APX :	Terranovaite Tetranatrolite	51-1439 33-1206	TER NAT
-1 -1	47- 595 47- 596	ZZ9 RUT	SCS-14 SCS-24	47- 409 50- 73	729 729	Thomsonite	35- 498	THO
-10	37- 355 39- 96	TON TON	SSZ-13 SSZ-16	47- 762	CHA	Thomsomits TiAPSO-11	46-1448 46- 847	THO AEL
-10 -10	39- 96 39- 97	TON	55Z-16 55Z-17	47- 763 47- 764	AFX PHI	Tiapso-11 Tiapso-16	46- 848 46- 849	ael Ast
-10 -10 ,	39- 98 39- 99	TON TON	65Z-19 SSZ-23	47- 765 51-1377	ZZ9 STT	TiAPSO-16 TiAPSO-94	46- 850 46- 851	AST CHA
-10 -10	44- 611 44- 612	TON TON	SSZ-24 SSZ-24	45- 130 45- 131	AFI AFI	TiAPSO-34 TiAPSO-35	46- 852 46- 859	CRA LEV
i-10, (H)	38- 194	TON	\$8Z-25	46- 267	. MWW	Tiapso-35	46- 854	LEV
1-10, (K.H) 1-10, (K.Na)	37- 356 39- 95	TON TON	SSZ-25 SSZ-25, calcined	50-1679 51-1598	MWW MWW	TIAPSO-44 TIAPSO-5	46- 855 46- 845	CHA ·
-10, (Na) -3	39- 94 42- 20	TON LEV	SSZ-26 SSZ-26	47- 355 47- 674	CON	TiAPSO-5 Ti-leucite	46- 846 52-1498	AFI ANA
ı-3	46- 749	LEV	88Z-32	48- 495	MTT	Tounkite	50-1541	229
1-3 1-3	47- 705 47- 706	LEV LEV	SSZ-33 SSZ-35, as-synthesized	52- 109 51-1593	CON STF	TsVK-1 TsVK-1	42- 12 42- 13	MEL MBL
-3 -6	47- 707 42- 119	LEV MF1	SSZ-35, as-synthesized, alumino silicate	51-159 <del>5</del>	STF	TaVK-II TaVK-II	42- 16 42- 17	MFI MFI
ı <b>-</b> 5	42- 120	MFI	SSZ-35, calcined	51-1594	STF	Tsch\PIortnerite	50-1611	TSC
1-6(1) 1-6(2)	42- 358 42- 359	ZZ9 ZZ9	SSZ-44 SSZ-44	52- 115 52- 117	SFF SFF	Tschernichito UCSB-10 GaZn	45-1396 49- 617	BEA SBT
tadecasil tadecasil	48- 475 48- 476	AST AST	STA-1 STA-1	49- 628 51-1757	SAO SAO	UCSB-6GaCo UCSB-6Co	49- 626 49- 625	SBS -
Trotite	22- 803	OFF OFF	STA-2	49- 620	SAT	US-Y	42- 18	FAU
fretite nega	25-1186 23-1894	MAZ	STA-2 STA-5	51-1756 51-1755	SAT ZZ9	USC-4 USI-10B	47- 718 42- 298	MFI ZZ9
nega hasapsite	44- 11 41-1384	MAZ RHO	STA-6 SUZ-2	51-1754 47- 407	SAS ZZ9	UTD-1 UTD-1 as synthesized	50- 57 52- 160	DON DON
ranatrolite ranatrolite	35- 458 42-1386	NAT NAT	SUZ-2 SUZ-9, as-synthesized	47- 408 51- 449	ZZ9	UTD-2	52- 103	ZZ9
rtheite	36- 378	PAR	SUZ-9, calcined	52- 280	7Z9 7Z9	UTD-3 UTD-3	52- 106 52- 107	ZZ9 ZZ9
ulingite ulingite	39-1378 50-1604	PAU PAU	Sacrofanite Scolecite	47-1741 41-1355	ZZ9 NAT	UTD-5 UTD-6	52- 104 52- 105	ZZ9 ZZ9
rhomite rlislite	29- 284 38- 395	ZZ9 LTL	Si-NCL-1 SiCo-9	49- 673 42- 495	ZZ4 ZZ9	UTD-6 UiO-7	52- 108 49- 631	ZZ9 -
ase F, (Ba,Li) ase M, (Ba)	30- 742 30- 107	EDI PHI	Silhydrite Silica X	25-1332	<b>ZZ9</b>	V-NCL-1	49- 674	224
ase M, (Ba,Li)	30-107	PHI	Silica A Silica sodalite	34-1382 51-1423	ZZ9 SOD	VPI-5 VPI-5	44- 503 45- 176	VFI VFI
ase M, (Ba,Na) asc N	30- 743 23-1313	PHI ZZ9	Silicalite Silicalite-1, (DIPA,F)	44- 696 45- 789	MPI MPI	VPI-5 VPI-5	45- 476 46- 171	VPI
ase O ase X	27-1335 28-1036	ZZ9 FAU	Silicalite-1, (TPA,F) Silicalite-1, (TRIPA,F)	45- 737 45- 738	MPI MPI	VPI-5 VPI-7	46- 651	VFI VFI
ase X1	34- 717	729	Silicalits-2, (Ti)	43- 55	MEL	VSZ-5	46- 563 39- 46	VSV 2Z9
ase X2 ase Y	31-1234 31-1233	ZZ9 ZZ9	Silicate E Sodalite	47- 715 37- 476	MPI SOD	Variscite Variscite	25- 18 33- 33	ZZ1 ZZ1
Illipsite illipsite	39-1375 61-1497	PHI PHI	Sodalite Sodalite	46- 103 50- 562	SOD SOD	Viseite Vishnevite	5- 616 46-1833	ANA A
lucite	25- 194	ANA	Sodalite	52- 145	SOD	Wairakite	15- 139	ANA :
llucite llucite	29- 407 47- 471	ANA ANA	Sedalite Sedalite (F)	52- 146 49- 937	SOD SOD	Walrakite Wellsito	42-1451 39-1376	ANA PHI
lucite, (Cu) lucite, (Fe)	44- 47 45- 418	ANA ANA	Sodalite (Li,Cl,Be,As) Sodalite (Li,Cl,Be,P)	46- 560 46- 561	SOD SOD	Wenkite Willhendersonite	19-1418 35- 643	WEN CHA
llucite,(Fe)	43-1486	ANA	Bodalite, (Ag)	43- 238	SOD	Yugawaralite	39-1372	YUG
(O (Ti) IB-13	46- 553 50-1677	RHO RTH	Sodalite, (Ag) Sodalite, (Ag,Ga)	43- 239 43- 240	SOD SOD	Z-21 ZK-14, (K,TMA)	27-1405 37- 792	LTN CHA
JB-13 JB-3	50-1707 50-1695	RTH RTE	Sodalite, (B(OH)4) Sodalite, (B(OH)4)	43- 250 43- 251	SOD SOD	ZK-21 ZK-4	27-1406 44- 100	LTA LTA
TB-3	50-1708	RTE	Sodalite, (CN)	37- 196	SOD	ZK-5	37- 360	KFI
JB-4 	50-1696 27- 15	ZZ9 RHO	Sodalite, (CO3) Sodalite, (G2)	24-1045 43- 245	SOD SOD	ZK-6 ZK-5	39- 220 40- 338	KFI KPI
10 ·	27-1086 40- 337	RHO RHO	Sodalita, (Ge) Sodalita, (Ge)	43- 141 43- 241	SOD	ZK-5 ZK-5	40- 339 44- 101	KPI KPI KFI
o (Rb,Be,P)	46- 652	RHO	Sodnite, (Ge)	43- 242	SOD	ZK-5, (Na,Li)	41- 30	KFI KFI

		Structure			Characteria			Stern 4
Zeolite Name	PDF#	Type Code	Zeolite Name	PDF#	Structure Type Code	Zeolite Name	PDF#	Structure Type Code
ZKU-4 ZKU-5 ZEM-10	42- 307 42- 306 62- 142	229 229 , 224.	Zeolite ABW (T1) Zeolite ABW (T1)	44- 51 46- 132	ABW ABW	Zeolite ULM-5 Zeolite Upsilon	49- 934 43- 577	229 221
A7SM-11 A7SM-11	38- 246 38- 247	MEL MEL	Zeolite ABW, (Li) Zeolite ABW, (Li) Zeolite ABW, (Li)	27-1211 39- 160 39- 215	ABW ABW ABW	Zeolite V Zeolite X, (Ag)	89- 191 38- 233	SOD PAU
ZSM-11 ZSM-11	38- 248 42- 22	MEL MEL	Zeolite ABW, (Li) . Zeolite ABW, (Li)	40- 63*	ABW	Zeolite X, (Ba) Zeolite X, (Ca) Zeolite X, (Ce)	38- 234 ° 38- 232	PAU PAU
ZSM-11, (H) ZSM-12	38- 195 43- 439	: MEL MTW	Zeolite ABW, (Li) Zeolite Al-mordenite	41- 554 47- 27 . 49- 924	ABW ABW MOR	Zeolite X, (Gd)	38- 235 - 43- 149	PAU . PAU
75M-12 75M-12	44- 68 47- 708	MTW . MTW	Zeolite Al/Nu-23 Zeolite Barrer L, (Sr)	49- 922 17- 144	FBR	Zeolite X, (K) Zeolite X, (Li)	26- 898 38- 236	FAU FAU
ZEM-18 ZEM-18	43- 57 52- 144	MEI MEI	Zeolite Beta Zeolite Beta	47- 183 48- 38	ZZ9 ZZ9 BEA	Zeolite X, (NH4) Zeolite X, (Na)	39- 139 38- 237	PAU PAU
2SM-20 2SM-20	43- 46 43- 46	EMT FAU	Zeolite Beta Zeolite CHNUAP-3	48- 74 49- 917	BEA ZZ9	Zeolita X, (Na) Zeolita X, (Na) Zeolita X, (Na) Zeolita X, (Na) Zeolita X, (X)	39- 218 41- 118 26- 895	FAU FAU FAU
75M-20 78M-20	47- 553 47- 553	ÉMT FAU	Zeolite CHNUAP-4 Zeolite Co(APSO)44	49- 918 49- 658	ZZ9 CHA	Zeolite Y Zeolite Y	38- 238 38- 239	PAU
F7SM-20 F7SM-20	47- 554 47- 554	emt Fau	Zeolite Cs-D Zeolite D, (Cs)	· 22- 170 39- 131	7729 7729	Zeolite Y Zeolite Y	38- 240 40- 386	FAU FAU FAU
75M-20, dealuminated 75M-20, dealuminated	45- 111 45- 111	emt Pau	Zeolite D, (Rb) Zeolite D, (Rb)	22- 787 38- 217	<b>22</b> 9 EDI	Zeolite Y (K,Ga) Zeolite Y, (K)	46- 568 26- 893	PAU PAU
75M-22 75M-22	44- 119 50-1675	TON TON	Zeolite D, (Sr) Zeolite D, (Sr)	17- 757 18-1266	ZZ9 FER	Zeolite Y, (K) Zeolite Y, (K)	26- 894 26- 896	FAU FAU
F/2SM-22 (6i) F/2SM-23	46- 569 43- 582	ton Mtt	Zeolite B Zeolite E, (K)	23-1895 44-1392	EAB EAB	Zeolite Y, (K) Zeolite Y, (K,NH4)	26- 897 26- 899	PAU FAU
75M-23 25M-23	44- 102 46- 570 43- 24	MTT MTT ZZ9	Zeolite E, (Na,TMA) Zeolite ECR-18	35-1502 48- 536	eab Pau	Zeolite Y, (Na) Zeolite Y, (Na, Be,P) Zeolite Y, (Na, Mg,Be,P)	43- 168 45- 125	PAU PAU
75M-25 75M-25 75M-3	44- 12 38- 317	229 EMT	Zeolite ECR-9 Zeolite F Zeolite F, (K)	48- 643 44-1388 38- 216	ZZ9 RDI	Zeolite Y, dealuminated	45- 127 45- 112	FAU FAU
S-MES S-MES	38- 317 48- 730	FAU EMT	Zeolito F. (Sr)	17- 141	EDI GME	Zeolite Zh Zeolite-RHO	16- 612 50-1678	SOD RHO
75M-3 25M-34	48- 730 42- 308	FAU ERI	Zeolite G, (Ba) Zeolite G, (Sr) Zeolite Ga-mordenite	19- 91 17- 142 49- 925	ZZ9 CHA MOR	ZnAPO-35	52-1506	LEV
ŽEM-34 ŽEM-34	42- 308 42- 374	OPP Eri	Zeolite Ga/Nu-23 Zeolite H	49- 923	FER			
73M-34 75M-34	42- 374 43- 578	OFF ERI	Zeolite HZSM-6	16- 715 49- 657 17- 139	PHI MFI ANA			
5 75M-34 25M-34	43- 578 48- 661	OFF ZZ1	Zeolite I, (Br) Zeolite J, (Ba) Zeolite K, (Ba)	19- 92 19- 93	2Z9 2Z9			
ZSM-35 ZSM-35	44- 104 44- 109	FER PER	Zeolite K-P, (Na) Zeolite K-G1	39- 217 44- 250	EDI : CHA		•	
T/SM-35 ZSM-38	51- 242 48- 576	FER FER	Zeolite K-H Zeolite K-I	16- 692 18- 988	2Z9 2Z9			•
75M-38 75M-39 75M-39	44- 105 40- 136	PER MTN	Zeolite K-I Zeolite K-M	22- 793 . 30- 902	ZZ9 MER			
72W-39 72W-39 72W-39	41- 553 47- 719 47- 720	MTN MTN	Zenlite K-Z Zenlite KZ-1	22- 794 37- 411	ZZ9 MTT			
ZEM-4	94-1890	MTN MAZ	Zeolite KZ-2 Zeolite L	37- 412 43- 47	ton Ltl	] ;		
72M-4 72M-43 72M-43	42- 309 42- 377 42- 376	MAZ ZZ9 ZZ9	Zeolite L Zeolite L Zeolite L	43- 560 44-1393	LTL LTL			
75M-43 75M-48	44- 695 48- 531	ZZ9 ZZ1	Zeolite L2-278 Zeolite L2-276	48- 514 49- 919 49- 920	LTL 2Z9 2Z9			ŧ
25M-48 25M-5	44-1394 87- 390	221 MFI	Zeolite LZ-276 Zeolite M, (Sr)	49- 921 17- 138	ZZ9 MOR			
ZSM-5 ZSM-5	39- 225 42- 23	MFI MFI	Zeolite MCM-22 Zeolite MCM-47	49- 656 48- 537	MWW ZZ9	}		
75M-5 75M-5 75M-5	42- 24 48- 821	MPI MPI	Zeolite MCM-48 Zeolite N	50- 511 26-1988	ZZ9 LTN			
PZSM-5 CVSV c	43- 322 44- 2 44- 3	mfi Mfi	Zeolite N Zeolite N, (Sr)	50- 90 17- 755	EDI LTN			
75M-6 25M-5	45- 120	MFI MFI	Zeolite N-L Zeolite Nu-1	14- 18 49- 933	GIS RUT			
ZSM-5, (A1)	47- 638 40- 64 45- 133	MPI MPI MFI	Zeolite Nu-87 Zeolite Nu-87, (Na) Zeolite OE	48- 89 48- 545	NES NES			
2SM-5, (Fa) 2SM-5, (H)	39- 161 37- 359	MFI MFI	Zeolite P Zeolite P	43- 39 24-1432 24-1433	ZZ9 KFI KFI			
25M-5, (Na) 25M-5, (TI)	37- 361 45- 191	MPI MPI	Zeolite P, (Na) Zeolite P, (Na)	40-1464 44- 52	GIS GIS			
7.28M-57 25M-57, calcined	45- 192 47- 635	MPS MPS	Zeolite P-A Zeolite P-B	38- 323 38- 325	LTA GIS	}		
25M-8	43- 40 41- 411	SCT MP1	Zeolite P-C Zeolite P-G	38- 819 38- 321	ANA CHA			
7.20M-8 17.25M-8 2.27T-s	48- 134 48- 135	MFI MFI	Zeolite P-L Zeolite P-R	38- 324 38- 322	LTL CHA			
Zeolite (Na,Zo,P)	44-1389 45- 128	CHA FAU	Zeolite P-W Zeolite PI, (Na)	38- 320 39- 219	mer Gis			
Essgate 4A Fredite 4A, (Ag) Fredite 4A, (Co)	43- 142 43- 143 43- 144	LTA LTA LTA	Zeolite Phi Zeolite Pt Zeolite Q	38- 261 34- 524	ZZ9 GIS			
Colite 5A Spoilte 5A	19-1183 19-1454	LTA LTA	Zeolite Q' Zeolite Q' Zeolite Q, (Sr)	24-1431 24-1434 17- 756	KPI KPI YUG			
Zolite A (Co.CS2) Zolite A (Pb)	46- 564 48- 565	LTA LTA	Zeolite Q, (Sr) Zeolite R, (Sr)	18-1267	HEN Ang			
Zeglite A. (Ag) Zeglite A. (Cd)	43- 145 43- 146	LTA LTA	Zeolite Rb-M Zeolite Rho, (Rb,Be,As)	17- 148 30-1043 45- 129	MER RHO			
ASS. (Ca)  SM-5, (Fa)  SM-5, (Fa)  SM-5, (R)  SM-5, (Na)  SM-5, (Na)  SM-5, (Na)  SM-6, (Na)  SM-6, (Na)  SM-6, (Na)  SM-6  SM-8  SM	45- 178 45- 188	LTA LTA	Zeolite SCS-15 Zeolite SCS-17	48-1060 48-1061	ZZ9 ZZ9	1		
Zéolite A, (Cs,Ca) Zéolite A, (Cs,Ca)	45- 189 45- 190	LTA LTA	Zeolite SCS-18 Zeolite SCS-19	48-1062 48-1063	729 229			
Zeolite A, (K) Zeolite A, (K,Zn) Zeolite A, (Li)	43- 147 43- 148	LTA LTA	Zeolita SCS-20 Zeolita SCS-21	48-1064 48-1065	ZZ9 ZZ9			
Geolite A. (Li) Zeolite A. (Na)	38- 242 31-1261	LTA LTA	Zeolite SSZ-28 Zeolite SSZ-28	49- 915 49- 916	ZZ9 ZZ9			
Zeolite A. (Na)	38- 241 39- 222 39- 223	LTA LTA LTA	Zeolite SSZ-37 Zeolite SSZ-37 Zeolite Sigma-2	49- 927 49- 928 40-1498	224 224 SGT			
Zeolite A. (Rb.Ag)	45- 185	LTA	Zeolite Sigma-2	42- 26	SGT			
Acita A. (K.Zm)  Acita A. (Li)  Acita A. (Na)	45- 186 45- 187 38- 243	LTA LTA LTA	Zeolite Theta-1 Zeolite Theta-1 Zeolite Theta-1, (Ga)	38- 197 48- 23 43- 320	TON TON TON		•	
Soulite A, (TI)	38- 244	LTA	Zeolite Theta-1, (Na,H)	37- 857	TON	ĺ		

iure CO RRULW TILBR TOOLL CCAAV VALLA ILLIT CATSE UTING 99999 9N4TT TITVS LIANA MUMAG MAAAN DEEDE

### This Page is Inserted by IFW Indexing and Scanning Operations and is not part of the Official Record

#### **BEST AVAILABLE IMAGES**

Defective images within this document are accurate representations of the original documents submitted by the applicant.

Defects in the images include but are not limited to the items checked:

□ BLACK BORDERS
□ IMAGE CUT OFF AT TOP, BOTTOM OR SIDES
□ FADED TEXT OR DRAWING
□ BLURRED OR ILLEGIBLE TEXT OR DRAWING
□ SKEWED/SLANTED IMAGES
□ COLOR OR BLACK AND WHITE PHOTOGRAPHS
□ GRAY SCALE DOCUMENTS
□ LINES OR MARKS ON ORIGINAL DOCUMENT
□ REFERENCE(S) OR EXHIBIT(S) SUBMITTED ARE POOR QUALITY

#### IMAGES ARE BEST AVAILABLE COPY.

☐ OTHER:

As rescanning these documents will not correct the image problems checked, please do not report these problems to the IFW Image Problem Mailbox.